Re-thinking play and inclusion for autistic pupils in Scottish schools: A postqualitative study of the role of app-based teacher professional learning

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A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy

2025

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Date: 31st October 2025

Acknowledgements

When Rosi Braidotti implored researchers to embrace the idea of being a 'nomadic enquirer', I doubt she had in mind the kind of nomad that I would become during my doctoral journey. Being nomadic, in her eyes, means to venture away from research and enquiry that is sedentary and protocol-bound, embracing instead exploration that is multi-directional, diversified and emancipatory (Braidotti, 2019). She did happen to mention that this did not usually involve the literal act of travelling, it is just "the subversion of set conventions and the conscious-raising that defines the nomadic state" (Braidotti, 2014, p. 182). In my case, however, the nomadic state I embodied throughout my PhD was indeed literal. From the 'work from home' phase of post-lockdown virtual research to the latter family circumstances that took me on daily travels to the back of beyond, I was a nomadic researcher in every sense of the word. My reading, writing and thinking became portable, but it suited me and my divergent style of scholarship. Braidotti (2011) did, however, also note that modern day portable nomadicity just "relocates the materiality" and becomes "a different social practice, which engenders specific social relations and interactions" because, after all "how can nomadic thought *not* be portable?" (p. 11).

My state of nomadism stems not from "a glamorous state of jet setting, integral to and complicitous with advanced capitalism" (Braidotti, 2014, p. 179) but as a result of both global and individual adversity. Consequently, I have leaned on so many more people than expected and had the benefit of a strong social network of supporters and cheerleaders throughout my unruly, unpredictable and uncertain journey. I know that this thesis would not have been possible without them. To start with the academic, I would like to thank of course my principal supervisor Anna Robinson for trusting me and allowing my own authenticity to prevail throughout the whole erratic expedition and supporting my growth as an academic in applied autism research. Zinnia Mevawalla, too, has been more than just a supervisor and I appreciate her constant presence in my journey as a kindred spirit in critical and resistant research for the inclusion, diversity and equity of all children. So many staff and peers at Strathclyde Institute of Education have influenced my critical thought, my learning process and my social, emotional and mental wellbeing in so many ways, and I thank them all. A grateful mention also goes out to Emelie Van De Vreken at the University of Edinburgh, for invaluable peer mentoring and tutoring in learning app development and coding when I had nowhere else to turn. Without Emelie, my Play

Research App may never have happened, and I owe her far more than she knows! For their support and kindness, I would also like to thank the board of trustees at International Play Association (IPA) Scotland for welcoming me and cheering me on when I felt out of my depth, I have learned so much from you all.

I know I would not have been able to finish my journey had I not spent the lattermost months of my doctorate knuckling down within the home comforts of my favourite nomadic space day after day. In a bit of a *Cheers* fashion, it turns out that sometimes it is indeed crucial to go to a pub 'where everybody knows your name' to take a much-needed break from the rest of the world and clear your head. So, to all the staff at Behind the Wall, I appreciate you all for keeping me sane while I worked all hours on my thesis – as well as fed, watered and caffeinated!

To friends old and new, I cannot list you all, but I hope you each know how much your support, presence and guidance has meant to me – if not please take this as my declaration of eternal gratitude. Friends appear in various guises, each coming into my life in many ways, with different backgrounds and characteristics, but being entangled in each other's lives has impacted my journey and spurred me on in ways you may not know. So, if you have been in my life at any point in the last four years and remain so, then I thank you for your contribution to my journey, and I hope our entanglement in life continues through whatever comes next. To my mum, forever my guiding star and the person I look up to more than anyone else in the world, thank you as always for stepping up and helping out when it was needed and for being my sounding board as my resident expert in all things education and play! My family support my dreams in the best way they can, and I am grateful for that. My final thanks go out to the most constant presence and resolute support in my life, Gary – my best friend and father of my wonderful children – I have no words to sum up the ways in which you have impacted my journey but I can assure you that our girls are lucky to see the dedication and commitment you gave to us when it counted the most. I am eternally grateful for the love my family, friends and everyone else has offered in their own ways.

I would also like to give myself a pat on the back, for learning to be my own authentic self throughout this journey and allowing the becoming of my thesis to be influenced by my own becoming. Here's to being me, authentically.

Preface

> It often costs us little to do things the way they have always been done… when one departs from these safe and protected pathways… danger can arise.
>
> (Brown & Proctor, 2025, p. 115).

This research presents as 'different from the norm' and, according to Brown and Proctor (2025), it makes this thesis 'dangerous' – I am speaking out against what the majority believes: challenging the dominant discourse and questioning the status quo. This can also mean deviating from conventional thesis structures and methods. A 'loose but tight' (Kuby, 2023) tactic of convention has been taken within this thesis, meaning that academic and institutional boundaries and expectations have been respected but an activist and authentic approach to the research and writing of this PhD 'faintly coup' (Psarologaki, 2023) against these issues. The vocabulary used within this thesis reflects the preferences of autistic people, using identity-first language and avoiding 'disorder' as a descriptor of autism (Martin & Milton, 2017). As an autistic researcher I run the risk of being accused of bias, or worse, not having the capacity to understand the literature or engage in academic discourse about autism (Botha, 2020). However, being objective about autism is not a necessary requirement for academic rigour, as long as we are "being honest about which values we are embedding in our work and forgoing hiding behind a guise of objectivity" and aiming to have "ethical, robust, and thorough research design which addresses research questions in a transparent and repeatable way" (Botha, 2020, p. 7). Throughout this research, I engage an ethico-onto-epistemology that allows me to remain authentic and just as an autistic researcher, whilst respecting the ethical, institutional and academic boundaries that apply. APA 7 style conventions aside, in the interests of inclusion I have chosen to name all others in the first citation of each source, followed by 'et al.' for subsequent citations if relevant. I feel that the exclusion of authors' names in the body of the text has the unnecessary consequence of some authors' credibility and recognition being constrained by these conventions. This is often the case with autistic authors who may have had opportunities limited by systemic ableism and discrimination, exacerbated by "the performative ethos favoured by current research… as well as inequalities of age, ethnicity, class and gender" (Milton, Rideout, Kourti, Loomes & Martin, 2019, p. 83). Therefore, all authors have been named in the first instance across the board.

Abstract

This thesis re-thinks play and inclusion for autistic pupils in Scotland, to find out the extent to which a novel mobile app could successfully integrate a survey with video-based provocations of play with professional learning and critical reflection for teachers to impact inclusion. The Embracing Authentic Autistic Play series is a unique professional learning programme highlighting dominant theories around autism, inclusion and play as well as Scotland-based policy and practice around play pedagogy, children's rights and inclusive play, with alternatives that challenge what is 'known'. The ethico-onto-epistemology developed from collective influences of posthuman theorists supports a diffractive data entanglement framework through a critical lens. What resulted from this non-standard relational approach was an unfolding of the concepts 'taking control' / 'relinquishing control' and 'not play' / 'play'. The difference created by these unexpected outcomes of the research enabled the creation of a diffractive 'rainbow' visualisation of key ideas and concepts. The key ideas of culture / mindset / perspective; language / justification; knowledge / understanding; confidence / consistency; relationships / empathy / support; value / acceptance / validation; buy-in / meaningful change / thinking outside the box; are visualised as key ideas that intra-act with the play and control continuums. This infographic can be used as a tool alongside the app, supporting teachers' learning journeys for maximum impact. A future is envisioned by interview participants, where utilising the app as a 'jumping off point' for widespread acceptance of authentic autistic play leads to the impact of this research to 'grow arms and legs'. There is a movement towards the radical acceptance of authentic autistic play underway. This research is a part of that, but the thesis is not the end of its involvement. It is an opportunity, a 'becoming', that will continue to intra-act with the authentic autistic play movement.

Lay Summary

Play and inclusion for autistic pupils in Scottish schools are turned on their heads within this thesis to question what teachers 'know'. A new mobile app with a built-in play video survey and a professional learning programme for teachers, considers 'knowledge' from deep-rooted ideas around autism, inclusion and play. Ideas like 'taking control' / 'relinquishing control' and 'not play' / 'play' were unfolded through a connected approach to the research, and a 'rainbow' graphic was created to share these. Culture, mindset and perspective; language and justification; knowledge and understanding; confidence and consistency; relationships, empathy and support; value, acceptance and validation; buy-in, meaningful change and thinking outside the box; are the key ideas shown in the rainbow infographic. This can be used as a tool alongside the app, supporting teachers' learning journeys for better outcomes. Interview participants saw a future where the app could be used as a starting point for more people to accept authentic autistic play. A trend towards acceptance is underway and this research is a part of that. But instead of stopping here with this thesis, it will stay tangled up in the trend moving forward.

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List of Publications

Guthrie Stirling, E. (2022, November 21st) *The Hidden Gems of Autistic Play.* Presented at the Participatory Autism Research Collaborative conference, online.

Guthrie Stirling, E. (2023, June, 7-8th) *Authentic Autistic Play is a Human Right.* Presented at the International Play Association Triennial conference, Glasgow.

Guthrie Stirling, E. (2025a) *Portraits of autistic play.* In McKendrick, J. & Baillie, T. (Eds) Born to Play. CCWB Press, Paisley.

Guthrie Stirling, E. (2025b) *Authentic Autistic Play - A Double Empathy Problem?* In Milton, D. (Ed) The Double Empathy Reader. Pavilion.

Guthrie Stirling, E. (in press) *Authentic Autistic Play is a Human Right.* In McKendrick, J. (Ed) Scotland for Play? Innovation and Purpose of Children's Play in Contemporary Scotland. Scottish Universities Press.

List of Play Research Webpages

Home page: https://playresearch.co.uk/

Bibliography: https://playresearch.co.uk/bibliography

Download the App: https://playresearch.co.uk/download-the-app

Participant Information: https://playresearch.co.uk/participant-information

Positionality Statement: https://playresearch.co.uk/f/extended-positionality-statement

Privacy Policy: https://playresearch.co.uk/privacy-policy

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Part one: Introducing the research

1. Setting the scene: Why develop a mobile app for teacher professional learning and data collection for research on authentic autistic play?

1.1 Setting the scene

In this introductory chapter, I intend to set the scene for my readers, not only in relation to the research and how it came to be, but also with regards to how the thesis is presented and the background to how the thesis developed in this way. For some brief context, I am an education professional who has now culminated my PhD Applied Autism Research as a full-time student at the University of Strathclyde. I started my professional career as a primary teacher after a number of years as an early years and additional support needs assistant, before moving onto specialist teaching within autism provisions. My PhD focuses on the inclusion of autistic pupils through play in schools across Scotland, by way of developing a professional learning programme for registered teachers. This has been a multifaceted process, including the creation and implementation of a novel mobile app with built-in functionality to serve as an all-in-one research tool.

In terms of impact, considering Taylor, Quinn and Franklin Phipps' (2021) description, taking a different approach by rejecting the idea of impact as a spectrum of significance or ledgers of increasingly important benefits can allow us as researchers to focus on ripples. Challenging dominant discourses and making the lesser-known known is part of the process of creating ripples. The result of this may be that non-logical or unexpected connections are made that may not be the most productive, but (in the words of Jocey Quinn)

> My research is not a neutral or objective endeavour. It is both intensely personal and a project of worlding, formed of values, desires and fantasies of a better world, fantasies that I seek to materialise through my work with others.
>
> (Taylor et al., 2021, p. 185)

Similarly, Honan and Bright argue that it is "imperative for doctoral students not to adapt their thinking and writing to what is required" and instead to embrace "a style and structure that eschews the already thought: a writing that is against style and against structure" (in Ingram, 2021, p. 260). This is what I endeavour to look at in terms of the objectives of this research and as a result the thesis itself might emerge in non-logical or unexpected ways and be organised in a fashion that eschews common doctoral thesis structure. It would be dishonest to suggest that this was a comfortable or easy concept to embrace as a PhD student, and I have had concerns and doubts over how this would be received by the academy. However, the questions of research should not be constrained to "Will this satisfy the examiners? Will the examiners [think my thesis is] appropriate?" but instead ask "Who are we as doctoral researchers… What spaces do we want this to be?" (Ingram, 2021, p. 263).

The objectives of this research have been to find out:

1. To what extent can a novel mobile app successfully integrate a survey with video-based-provocations, a professional learning programme, and a platform for critical reflection of teachers' practice as a tool for applied autism research in education?
2. In what ways might a professional learning programme about authentic autistic play in Scottish schools support teachers to reflect and engage critically in self-evaluation (as per the GTCS standards for registration)?
3. Are there ways in which this programme might have an impact on the successful inclusion of autistic pupils through play, by disrupting the dominant discourse on autistic play and challenging the status quo in Scottish schools?

Part one: Introducing the research

The content of the professional learning programme includes highlighting and problematising some commonly used theories around autistic play and inclusion and opportunities for reconsidering current policy and practice. The Embracing Authentic Autistic Play series (Appendix B) is a unique professional learning programme that I developed for the purposes of this study, based on an intensive landscape of the literature and includes some theories around autism, inclusion and play that have existed for a number of years. Some alternative views that are established within the literature (but not necessarily well known within education) are proposed to challenge participants' acceptance of dominant discourses and posit ways in which the status quo can potentially be challenged. The programme encourages critical reflection of professional knowledge and understanding using Sharratt's (2016) 5 Critical Questions:

What are you learning?
How are you doing?
How do you know?
How can you improve?
Where do you go for help?

I knew that my research was three-fold so I had to plan for a research tool that allowed:

1. A survey with a Likert scale of agreement to gauge teachers' views on welcome play, using multiple high-quality video clips of children at play
2. Several high-quality video lectures in a professional learning programme with opportunities for critical reflection throughout each stage
3. An upload facility for teachers' diary entries to provide insight on critical reflection around practice following completion of the professional learning programme

This resulted in a tool in the form of a novel mobile application (app) with a multitude of features, that was designed and developed specifically for this purpose. Development of the app took two years due to the steep learning curve of being a novice app developer, having never coded before. The app has been built from scratch for the sole purpose of carrying out this multifaceted research and is completely unique. It has undergone rigorous testing and passed stringent protocols from both Android and Apple platforms, as well as ethical approval from the University of Strathclyde.

As this type of research is completely novel and provides a never-been-done-before insight into authentic autistic play in schools and professional learning for teachers using mobile technology, it perhaps begs the question –

Why develop a mobile app for teacher professional learning and data collection for research on authentic autistic play?

The remainder of this chapter serves to answer that question, prior to delving into the literature, research, data interpretation and discussion in more detail throughout the rest of the thesis.

1.2 The Internet of Things and Education

At the beginning of my doctoral journey, Scotland and the rest of the world were still reeling from the initial onset and ongoing challenges of the Covid-19 global pandemic. In research, trends of mode, content, pace and expectations of surveys, all changed dramatically over a relatively short space of time as a result of the pandemic, but researchers have been adaptable and creative in how to overcome these challenges (Nind, Coverdale & Meckin, 2020). In the time since the pandemic began, it became

quite apparent that research through and via technology will likely continue to be pivotal moving forward, and "building and reinforcing these bridges for the common good can be a positive legacy from this unprecedented crisis" (De Boni, 2020, p. 3). A rapid shift to remote and online learning for schools, colleges and universities across the world created a necessity to leverage online platforms and mobile apps which, despite their pre-existing uses prior to the pandemic, created an upsurge in the development and redesign of learning apps, according to Adipat and Chotikapanich (2024). This had a considerable impact on the design and development of my doctoral research, not least because I was one of the 'work from home' cohort following lockdown. My full-time doctorate was carried out almost entirely remotely, with only occasional visits to campus, and would barely come under the (now well-known phrase) 'hybrid' working pattern that has become commonplace since Covid changed the working lives of an entire world.

In anticipatory response to such challenges, opportunities had already been identified for supporting internet-based research methods through the expansion of on-the-move online devices such as smart phones and tablets, which offer possibilities to integrate ordinary personal objects with internet technology through the 'Internet of Things' (Hewson, Vogel & Laurent, 2016). The Internet of Things (IoT) is the concept of a network of physical devices that allow users to collect and share information, enabling smart devices to communicate with each other and with other internet-enabled devices through connectivity technologies (cellular network, Wi-Fi, etc), cloud computing (where data is stored, processed and analysed) and security and privacy measures (such as encryption and authentication) which all play a vital part in making IoT possible

(IBM, 2023). The impact of IoT was predicted to be impressive, even pre-Covid, and it was anticipated that

> As the internet becomes more and more integrated into everyday objects, and consequently everyday lives, the scope for collecting all sorts of data in a range of everyday contexts will only expand.
>
> (Hewson et al., 2016, p. 60)

True to the prophecy, the potential applications of IoT, according to IBM, are abundant and multifaceted with the growing impact of internet technologies being felt across sectors and the role that IoT will play in shaping the world is not to be underestimated, changing the way that humans and non-humans experience the world. IoT contributes to the development of innovation, an increase in productivity and efficiency, as well as improving resource management and decision-making (Fowder & Radhakeesoon, 2025). Teaming this with cloud computing can enhance cost-effectiveness and accessibility through the creation of apps and infrastructures to develop new models of practice, and this can enable secure, connected and intelligent systems of work in a more impactful manner. In essence, "the emergence of disruptive technologies can prospectively revolutionise the life mechanisms on planet Earth" (Fowder & Radhakeesoon, 2025, pp. 234/235).

Teachers, teacher educators and researchers in education potentially have three opportunities for exploring IoT, according to Moreira, Vairinhos and Ramos (2024):

1. Discovering how to use IoT and how it can be implemented within the education sector
2. Using IoT for learning with technologies assisting and aiding teaching and learning processes

3. Finding out about IoT including the background of its development, societal impact, and critical reflection of its application in educational practice.

For this research, the main focus has been on using IoT for learning, in particular teacher professional learning, but also in learning from the data collected as its own subject for discovery. The impact of IoT on human and non-human actors, however, cannot be minimised because of the "ubiquitous presence of everyday objects connected to the internet" which potentially leads to IoT being "such an innovative technology that its impact on society will be equivalent to the industrial revolution" (Moreira, Vairinhos & Ramos, 2024, pp. 185/186). It can furthermore be used for more sustainable and ethical practices benefits beyond human societies.

1.3 The Role of Technology in Addressing Global Goals

The world becoming increasingly interconnected has led to an increased role for technology in addressing challenges across the world (Shafik, 2025). One primary framework to address these challenges for many countries, including Scotland, is through the Sustainable Development Goals (SDGs), and

> the complex, interrelated suite of the SDGs will require new and innovative approaches… the leveraging of new and innovative technologies towards positive ends.
>
> (Shafik, 2025, p. 497)

The SDGs, endorsed by the United Nations, aim to provide a comprehensive foundation for practitioners, policymakers and researchers alike, according to Shafik (2025). A visual representation of each SDG can be found below in Figure 1, shared in accordance with guidance set by United Nations:

[IMAGE 1: SUSTAINABLE DEVELOPMENT GOALS]

(United Nations Department for Global Communications, 2019, online)

The capacity of digital technologies to not only facilitate, but also accelerate, the achievement of these goals becomes more certain as time goes on, but as they continuously evolve so does their potential (Doley, Mungase, Sharma, Nikam, Kothe & Sharma, 2024). IoT has propelled global innovation and efficiency through lightning-fast advances in technology, and

> Besides revolutionising whole sectors, these developments are very congruent with the SDGs… to combat issues including poverty, inequality, climate change and environmental degradation.
>
> (Doley et al., 2024, p. 8456)

On a very basic, everyday level (among other, deeper sustainable benefits) using technology such as mobile devices in IoT can automatically lead to a reduction of paper use and waste, becoming more systematically eco-friendly as a result (Devi, Sabitha & Sathish Kuma, 2023). In terms of professional development, digital connectivity can provide promising developments in the ability to train leaders and managers in

cultivating sustainable practices such as inclusion and diversity in education to more widely impact policymaking and planning (dos Santos Foguel & Lopez, 2024).

Out of the 17 SDGs, a number of relevant targets can be directly applied to the acceleration of achieving goals through technological innovation and development, according to Ariansyah, Prayogi, Kurnia,Bilad and Sutarto (2024), in an ever-evolving digital eta. In 'SDG 4: Quality Education', promoting an inclusive and equitable education and lifelong education for all can be maximised by embracing digital technologies for accessibility and interactivity. One example given by Ariansyah et al. (2024) is the implementation of digital reporting platforms – collecting, collating and integrating data to improve decision-making and tailoring systems to individual and community needs. More progressive smart technologies can personalise educational processes, adapting learning content to suit the audience, and provides opportunities to ascertain real-time progress and instant feedback to and from learners, offering a more creative and inclusive education (dos Santos Foguel & Lopez, 2024). Through 'SDG 9: Industry, Innovation, and Infrastructure', Ariansyah et al. (2024) suggest that in fostering innovation by embracing digital technologies, all sectors could potentially be transformed and optimised to not only become more sustainable and reduce environmental impact, but also increase productivity and resilience. Customised training opportunities and tailored learning programmes that develop sustainable principles focused on innovation and systems can be widely shared through well-honed advanced technologies and improve practice more specifically according to need (dos Santos Foguel & Lopez, 2024). 'SDG 10: Reducing Inequality' and 'SDG 16: Peace, Justice and Strong Institutions' highlight the opportunities that digital technologies can

provide for social justice, equal access to support and resources, and the development of governments and institutions that are accountable, equitable and inclusive through, for example, the use of mobile apps for health and education information and online participation in training and community activities, according to Ariansyah et al. (2024). Sensitively customised teaching and learning approaches within technological advances in education can respond to cultural, socioeconomic and individual needs for marginalised or vulnerable groups in various contexts, and dos Santos Foguel and Lopez (2024), emphasise that these should "aim to promote empathy, social responsibility, collaboration, and respect for diversity" (p. 121). Adapted courses can be offered on human rights and social justice issues that focus on specific challenges within each context and offering these widely creates an ethos of civic engagement and collective responsibility for acting on these goals. Furthermore, 'SDG 17: Partnership for the Goals' emphasises the importance of developing partnerships, networks and communities with similar priorities, and the digitisation of educational technology can create easier access to collaborative virtual environments and encourage local, national and international cooperation through connected networks and information sharing in order to build cultural empathy, global partnership and educational best practice among public and private institutions and organisations (dos Santos Foguel & Lopez, 2024).

Throughout these endeavours, there should be an emphasis on

> minimising negative consequences and promoting technology as a tool for positive change in achieving the SDGs. This ethical commitment ensures that digital advancements align with both societal values and development goals.
>
> (Ariansyah et al., 2024, p. 353)

Applications of IoT will continue to develop across sectors, and researchers have multiple opportunities to tie in digital technologies with efforts to chip away at relevant SDGs in practice, and should make concerted efforts to do so in order to challenge ethical and social issues in a diverse global economy (Doley et al., 2024).

1.4 Technological and Ontological Disruption

Many organisations had, until the pandemic, been relatively conservative in embracing new technology that troubled the existing and established approaches to education (Li, Huijser, Xi, Limnou, Zhang & Kek, 2022). In the urgency of Covid and lockdown, the sector was essentially strongarmed into rapid, radical technological disruption, with Li et al. suggesting that

> Covid-19 may therefore present somewhat of a silver lining in an educational context… the disruption needed to cause an educational disruption… opened up to a wider learning ecology.
>
> (Li et al., 2022, p. 2)

Disruptive technologies, according to Fowder and Radhakeesoon (2025) can introduce public and private sectors to cutting-edge solutions such as IoT and cloud computing innovations, that can "address complex challenges, enhance efficiency, and contribute to sustainable development by bringing about a relevant and abrupt change" (p. 217). Each new type of technology as it emerges can transform how teachers teach, how learners learn, and how researchers research – these 'educational actors' interact with the technology through ever-expanding and unfolding applications in new and meaningful ways (dos Santos Foguel & Lopez, 2024). More contextualised experiences within flexible, adaptive and nomadic environments can encourage more self-directed learning, ambition and resourcefulness for actors within education through the

integration of (or total immersion in) advanced technologies such as IoT, and in these circumstances

> when emerging innovations reveal the limitations of the current paradigm, a shift occurs that requires a fundamental restructuring of dominant practices and concepts.
>
> (dos Santos Foguel & Lopez, 2024, p. 115)

In education, Devi et al. (2023) contend that the presence of IoT creates new pedagogies (such as teacher-directed or active learning approaches) and heutagogies (such as self-directed or autonomous, asynchronous learning) and access to resources, materials and media can be provided at the click of a button (or smart device). Changes in learning environment have been an inevitable offshoot of this development of new pedagogies, and

> After all, the modern age is characterised by personal and technical mobility, where mobile devices including phones, MP3 players and PDAs are carried everywhere, and the education paradigm is shifting towards distance learning.
>
> (Voloshyna, Melnychuk, Sapohoc, Burlaka and Khilya, 2024, p. 526)

Devi et al. (2023) highlight benefits beyond everyday usage, to the point of enhanced accessibility and participation in education through a variety of IoT applications. Software and hardware can support learning differences and disabilities for a more inclusive education; cloud technology allows for storage of large amounts of data; learners can often learn in their own time; educators and researchers can gather feedback through automated surveys and multiple-choice forms; and where books and articles may have been inaccessible to many without the ways or means afforded to them, vast and searchable online libraries with round-the-clock availability are now accessible through institutional membership and government-funded subscriptions. New tools are designed and developed in connected and technologically-enhanced

learning environments but these are poorly researched, and Emke and Kukulska-Hulme (2023) argue that doing so would require a new paradigm and new methodologies to explore them effectively. Devi et al. (2023) also advocate for the ongoing research and development of IoT and its applications in education for providing post-Covid solutions for teaching and learning. IoT is a 'hot topic' in academia, according to Doley et al. (2024), with research investigating current and future potential uses across a number of sectors. Intricate problems are able to be addressed by opening up to multidisciplinary methods that combine IoT with other cutting-edge technologies, among which innovation, digitisation, information handling, cloud computing, and online service provision are possible future pathways for researchers to take. An ill-, or perhaps under-researched area of education is mobile learning – and more specifically, mobile *professional* learning for teachers as opposed to the children or young people they teach (Burns, 2015).

Students and pupils learning from mobile apps in and out of the classroom is a familiar sight, according to Burns (2015), however mobile learning is not limited to the people being taught by the teachers. Teachers themselves can become beneficiaries of information, expertise, experiences and resources in the palms of their hands, and employers and institutions should begin to leverage the devices already in everyday use (Burns, 2015). Although much of the research focuses on the benefits of using IoT and mobile apps for children and young people's learning in schools, Voloshyna et al. (2024) suggest exploring the potential of the development and creation of new apps for professional learning as part of the natural digitisation of education, through gadgets that are widely available to teachers already. Teachers have myriad opportunities

already at hand with their personal gadgets and digital technologies, but IoT can provide further opportunities for specific, individualised and relevant approaches to their own learning needs, not just those of their pupils. The mere prevalence of mobile devices in everyday use should be enough to consider learning apps a mainstream medium for education – of teachers as well as of pupils – all that appears to be stopping this progress is the gap between what is on offer and what is taken up in reality, according to Voloshyna et al. (2024). The potential of IoT and the creation of new mobile apps for teachers' own learning, however, is myriad. In short,

> The future of IoT is exciting, with many new developments and innovations on the horizon... As the number of IoT devices continues to grow, [we] need to be prepared to adapt to new technologies and embrace new use cases and applications.
>
> (IBM, 2023, online)

1.5 Applications of IoT for Professional Learning

In many circumstances, using mobile devices for professional learning as part of IoT has been considered a natural step to take as technology advances (Voloshyna et al., 2024). This type of 'mobile learning' is becoming more effective as research around developments in technology and their benefits for teacher education become more coordinated, according to Hall and Connolly (2019), and can be implemented throughout career trajectories from initial teacher education (ITE), to induction training, and for professional learning. Mobile devices such as phones, tablets, and their connected gadgets are considerably widespread due to their easy portability (Pinter, Toninelli & de Pedraza, 2015). In some countries, mobile phone access has been at 100% for a number of years, and there has been a noticeable decline in the use of desktop computers and laptops in favour of smart devices (Sarker, 2018). With such a

growth in mobile phone ownership across the world, access to resources can be spread to the masses "regardless of race, caste, gender, geography, or socioeconomic status" (Burns, 2015, online). By the mid 2010s, 80% of the population were through to have smart devices (Garcia, Welford & Smith, 2016). Smart devices can be thought of as 'mini-computers' that have many features of a desktop computer with the standard aspects of a phone, resulting in myriad capabilities from texting, searching the web, touch-screen technology, and personalised programmes and apps (Burns, 2015). In their everyday lives, people use these digital devices for emailing, reading the news, shopping, social networking, general communication and searching for information, among countless other potential uses (Sarker, 2018; Pinter et al., 2015). Often, through distance, convenience, or circumstance, collegiate working and joint planning may now be done through connected technologies, with work discussions taking place online, and

> Rather than meeting face to face over dinner or coffee, we now face each other through computer monitors, iPad screens, and/or our smartphones.
>
> (Martin & Strom, 2017, p. 152)

For those working in the education sector, this concept can work flexibly for not only collegiate dialogue but for teaching practice, practitioner enquiry, and professional learning. In particular, Martin and Strom (2017) posit that digital technologies provide unprecedented affordances for educators and enquirers to participate in reconceptualised self-study through online, long-distance, collaborative, or otherwise re-imagined professional development and teacher education opportunities. Although not everyone has access to smart technology (for example, in India there is a rate of 6% smartphone ownership out of all mobile phone ownership), there are still opportunities

to use the mobile phone they already have to access information, resources, and learning opportunities using standard features with phone or internet connectivity (Burns, 2015). Using basic devices with the 'low-modality' features they already have access to, teachers in countries where audio, text or numerical information may be valued highly through mobile phone connectivity can still break through barriers for challenging what traditional professional learning is thought to be:

> Across many parts of the globe, simple phone-based social networking sites.... SMS, or free messaging apps provide teachers with access to in-service professional development or to a community of colleagues who share ideas and provide support for teachers living in rural or remote areas... mobile learning can be a professional development lifeline.
>
> (Burns, 2015, online)

An important question to ask in regard to mobile professional learning for teachers is 'how will the infrastructure of the course of learning be supported?' Hall and Connolly (2019) ask this in relation to designing, developing and evaluating innovative apps for mobile professional learning; building schemes that might enable teachers to use their own devices or, if feasible, provide devices for sole use; pioneering integration of research methods such as surveys and scales within apps; and prioritising agency and autonomy for teachers to enhance their critical reflection through personalised and customisable access to technology and apps to suit their context. Platforms and operating systems may vary for different users, and universal designs should be considered to avoid inaccessibility:

> For example, some gadgets have Android, while others have Microsoft or iPhone OS. In addition to the underlying software, there is the issue of outdated technology that cannot withstand new applications due to their requirements for screen resolution, video card, and even battery life.
>
> (Voloshyna et al., 2024, p. 527)

Issues could arise without careful consideration of this infrastructure – not every teacher in every country has access to a smartphone but may have a mobile phone with internet access; screensize and operating capabilities are not universal to each phone, which could make the learning activities challenging to engage with; limitations to synchronous interactions across space and time may run the risk of reducing professional learning programmes to rote memory or direct transmission of information; and lastly making sure that mobile professional learning is not replacing high quality, valuable professional learning opportunities as a way to cut costs (Burns, 2015). The apps must provide for value added:

> We need to guard against a reductionist vision of learning that conflates teacher professional development and support with little more than text messages, phone calls and audio snippets – versus face-to-face interaction with colleagues, materials and experiences.
>
> (Burns, 2015, online)

Technology can facilitate non-linear professional learning and break up false dichotomies and disrupt the status quo of roles as teacher, learner, researcher, student, and so on – interrupting the 'norm' of linear, hierarchical thinking and rewriting the paths for 'becoming' through the creation of new academic environments, new compositions of elements, new modes of being, and new journeys (Martin & Strom, 2017).

A re-imagining of professional learning and teacher development can enable education professionals (including researchers) to adapt to continuous changes in options and expectations and step away from previous linear, fixed, one-size-fits-all models of learning (Martin & Strom, 2017). But crucially, it seems, it matters less what the technology *is* (for example, IoT, Artificial Intelligence (AI), Virtual Learning Environments

(VLEs), or videoconferencing apps), but more what the technology *does* and *how it is done*, and

> because teacher development and teacher education development is a non-linear process, a rhizomatic approach complemented by technological tools allows teachers and teacher educators to conceptualise their development as recursive and perpetually becoming.
>
> (Martin & Strom, 2017, p. 162)

In learning of any kind, the event cannot be reduced to a quantifiable (or qualifiable) unity of things but is a pedagogical encounter that is part of an ongoing and evolving process, a becoming (Dixon, 2021). This particular rejection of ingrained norms and expectations in education is largely influenced by Gilles Deleuze and Felix Guattari, and their concept of 'rhizomatics', which in this context suggests a break away from reductionist patterns of thought in education that potentially limit possibilities through 'the done thing' (Martin & Strom, 2017). Rhizomatic thinking facilitates emerging appreciation of wider influences and multifaceted layers of connectivity to recognise that "our experiences as teachers and teacher educators [are] continuously shifting and in flux, affecting and influenced by our surroundings" (Martin & Strom, 2017, p. 153). Learning is a harmonious 'vibration' between and with learner, teacher, knowledge, and place – none of which cause any sole incident but together "provide the problem, structure or orientation to a given state of affairs around which it changes" (Dixon, 2021, p. 105).

The rhizome goes beyond this, an event within time but simultaneously beyond time, and creating new time – a synthesis of past, present and future, according to Dixon (2021). Navigating Deleuze and Guattari's rhizome theory (and their related concepts

such as becoming and assemblage) is not straightforward and can make embracing this philosophy challenging (Emke & Kukulska-Hulme, 2023). This is particularly challenging in education with its multi-layered ecosystems that exist in addition to simply just learner, teacher and classroom but in short, the idea of *becoming* within an *assemblage* is summarised by Emke and Kukulska-Hulme (2023) as the production created inside (and interrelated to) a constellation of entities and elements that come together within a fluid and dynamic space for an unspecified period of time. However, they query whether intimate familiarity with Deleuze and Guattari's theory is necessary to appreciate the concepts that surround it, and gatekeeping the ideas they have gifted to educational philosophy may stifle the benefits of embracing a new paradigm and new methodologies for education and education research.

Going beyond just the Deleuzian philosophies, Dixon (2021) also leans on Karen Barad's theory of timespacemattering, where a pedagogical encounter brings together the learner, teacher, knowledge and place in 'mutual constitution', with each emerging through intra-action, and "learning is materialised in this dynamic, intra-active becoming" (p. 114). Posthuman theories of assemblages and becoming may have been founded in Deleuze and Guattari's rhizomatic underpinnings but often go beyond this with more critical and expanded philosophies, such as Barad's intra-action and her ideas of being 'in the midst-ness' of connectivity, theorising how assemblages de-centre the human (such as the teacher, the learner, or the researcher) and emphasise "the material, the technological, socio-historical, the spatial, and the temporal" (French, Griffin & Lambert, 2023, p. 696). Critical posthumanism, such as Rosi Braidotti's ideas, acknowledges that teachers' assemblages are compounded by a world of complexities,

uncertainties and instabilities embedded in 'geo-political' contexts meaning no two teachers will have the same experiences within education (French et al., 2023), and

> The posthuman subject is a 'nomadic' subject, constantly creating and being created by the histories, contexts, material, and human entanglements.
>
> (Calderwood, 2025, p. 265)

Through this view, according to Calderwood (2025), because 'entanglements' are complex interplays between a multitude of subjects, the learning that takes place within a digital environment cannot be separated from the learner and their context and the digital environment cannot be separated from the design principles under which it was made.

1.6 Designing a Mobile App for Professional Learning and Data Collection

In relation to addressing the SDGs, creating disruptive technologies, restructuring dominant practices and concepts, and maintaining ethics, a design brief for a new mobile app emerged from my personal critical analysis (musings which I later discuss in chapter 4) of the current familiar technological offerings in the context of educational research within my own higher education institution. The design brief (Appendix A) addressed the needs identified through this critique, as well as a literature appraisal that developed into a formal tool for seeking support as I unearthed this unfamiliar territory. Several non-negotiable elements were planned within the brief:

- Randomly generated username for anonymity
- Sign up with email/phone number for alerts (but no way for researcher to have these details)
- User consent/information form to be completed upon download, applicable to all phases of research
- Video-as-questions survey with 80 video clips on autoplay and Likert scale (buttons or slider) 1-5 (Strongly Agree to Strongly Disagree)

- Static statement/question displayed "I would welcome this type of play from the pupils in my class…" with all video clips
- Prompt to respond following submission of video responses with next-phase recruitment queries – do you currently work within a play-based curriculum? do you have one or more autistic pupils in your class? would you like to participate in professional learning about autistic play?
- Automatic exclusion from next phase if answer is no to any of the above, send to thank you page and lock out of app
- Automatic inclusion for next phase if answer is yes to all, and invite to participate in professional learning event
- Professional learning webinar to take place outside of app (Zoom)
- Usernames to be used in Zoom, instruction page on app how to do this prior to event
- Webinar course materials will be uploaded to app for easy access
- Diary study should allow in-app uploads of video, audio and word document files
- Frequent notifications from app as reminders to update diary, whole group questions and prompts to upload diary regularly, and chat/messaging function will be needed
- Interviews will also take place outside of app, again on Zoom using usernames
- Web link for incentive to be sent out via the app, with no way of researcher knowing participants' personal information (eg using a reward code for online incentive with external provider)

Whilst a few changes to this design ended up being either necessary through the limitations of the coding languages available, or improved upon for a better user experience once I had gained a better understanding of the possibilities of app design, the end product of the app is largely comparable to this initial brief thanks to a rigorous two-year process of development. Greater interaction with each section of the app was encouraged as the capabilities of the app grew, with problem solving and troubleshooting primarily focusing on maximising participation and ease of use. In the end I was satisfied that the final app design matched or exceeded the initial brief and a process of testing and review confirmed its usability before its release.

Many apps for professional education support an interactive rather than passive approach and involve a requirement for active engagement in self-directed learning

(Gladman, Gallagher & Grainger, 2023). Tools for this interaction can range from text-based scenarios to immersion in virtual reality and AI video games however, even if the participant has to engage in an element of reading or passively watching a video, making progress in an interactive learning app is often contingent on making informed choices and assessing knowledge in order to reveal the next phase of learning, according to Gladman et al. (2023). Lee and Bonk (2024) indicate that "Self-directed learners who have learning goals are driven to search for knowledge bases and resources for the necessary content" (p. 96), but often professional education apps are limited to three primary purposes – reference, interactive learning, and testing or assessment – and in-app signposting to further online resources and learning opportunities could support deeper engagement in study and practice beyond the information shared in the app (Gladman et al., 2023). Even with a combination of these elements within an app design, many information-based professional education apps fail to include a major learning requirement of registered teachers in Scotland – critical reflection. In the General Teaching Council for Scotland (GTCS) professional standards, registered teachers are expected to "reflect and engage critically in self evaluation" and "maintain a reflective record of evidence of impact of professional learning and development" (GTCS, 2021, p. 11). Self-reflection, in the sense of "analysing and evaluating one's own work" applies to high quality professional learning for teachers and is a "crucial instructional strategy to support [self-directed learning]" (Lee & Bonk, 2024, p. 596). Becoming a critically reflective practitioner requires that teachers ask questions, identify gaps in their own knowledge and skills, and seek out appropriate learning experiences (often done through self-directed learning), and think critically about their own learning experiences and the outcomes of these, according to Lee and

Bonk (2024). Teachers often lack time to "sit down after each class and then write down every reflection" but they are often, however, "thoroughly conversant with the usage of mobile applications" (Martin-Gomez, Rodriguez, Mena & Zhu, 2020, p. 131).

The use of apps for critical reflection is now common practice for pre-service (student) teachers in ITE programmes, but teachers, teacher educators and researchers might now want to begin considering their use on a wider basis, according to Martin-Gomez, Rodriguez, Mena and Zhu (2020). Aspects of various mobile apps for reflective practice commonly used in ITE programmes can be combined with methodological resources to inform research, creating a multifaceted tool such as the app developed by Martin-Gomez, Rodriguez, Mena and Zhu (2020), where a 'main menu' function of the app indicates the various sections of the mobile tool that teachers can access (through the use of an authorised username and password) multiple educational functions within a single app design. Lee and Bonk (2024) suggest that research into the use of multifaceted tools taking advantage of technological developments could improve understanding of teachers' experiences of self-directed learning, self-evaluation, and critical reflection in practice and in turn have considerable implications in the wider social arena as insights could reveal the potential impacts of these tools beyond just professional learning. Through the use of apps in this way, teachers, teacher educators and researchers may start to

> consider the process by which people learn, and address their implicit misconceptions… actively reflect on their teaching practices and directly experiment with them… gain novel insights and begin to question common assumptions.
>
> (Lee & Bonk, 2024, p. 597)

If, as French et al. (2023) suggest, programmes of professional learning for teachers can be assemblages in and of themselves, "within which the multiple, messy, and complex contradictions and tensions that… [professional learning] must be responsive to" (p. 696), then the components and the resultant learning should intersect and interrelate so that relationships between each part of the assemblage emerge to deepen the learning. Whilst, through design, the sections of the app in this research are contingency-based for structural progress and compulsory 'low-stakes' self-assessment (as per suggestions by Darby, 2019), the actual components of the app are anti-hierarchical in the sense that no one part is more important than the other. Each component holds value on its own, and in intra-action with each other. Teachers who engage with the app bring their own background history, experiences, prejudices and social structures (French et al., 2023), that then interrelate with the app's assemblage and create deeper learning and meaning not just for that individual teacher, but as part of a wider rhizomatic phenomenon when the data from each teacher becomes part of the research assemblage of this study.

1.7 The Research Assemblage as a Liminal Space

This assemblage – the professional learning programme, the data gathered, the wider rhizomatic configurations of becoming through the research – can be seen as one of many

> liminal, dynamic and fluid spaces for 'an ongoing series of confrontations with self, others, ideas, ethics, dilemmas, conundrums and contradictions' and indeed non-human and affective elements that also constitute educational spaces.
>
> (French et al., 2023, p. 697)

Accounting for the affect involved, which often stems from feelings of discomfort and uncertainty of questioning dominant discourses and troubling normative expectations through professional learning (French et al., 2023), it was expected that participants may experience difficulty completing the programme, but one of the most carefully designed aspects of the app is that was rigorously planned, tested and reviewed to prevent any technological aspects of the app creating a barrier to progress.

As part of the app development, in order to maximise the potential efficacy of the professional learning programme, I developed a one-off, in-person pilot to measure participant experience and gauge their views on the content of the programme. Prior to this, a landscape of the literature was created as a basis for the development of the professional learning modules. The literature (found in the next chapter), based not only on contemporary views of autism and the traditional theories upon which most depictions of autism are based but also some alternative views, illustrates concepts that are well documented within the literature but not necessarily well known within education. The content of the professional learning modules derived from highlighting these conflicting theories and troubling teachers' established perspectives on autistic play through considering current policy and practice. The pilot project investigated the question "What future potential can a professional learning programme about authentic autistic play have to support teachers' critical reflection and improve practice?" and doubled up as a practitioner enquiry to aid in my own professional learning as a teacher educator. The pilot was relatively unique in this sense, but teacher researchers can have the supplementary benefit of their research also being able to improve their own

practice. Theory and practice need not be dichotomous, and professionals who are researchers can dynamically and fluidly go between multiple roles, and

> Because the practitioner is the researcher and the researcher is the practitioner, this form of inquiry assumes, expects, and welcomes a reflexive stance.
>
> (Husbye et al., 2019, p. 2)

Teacher identities, beliefs and values are all crucial in critical reflection, and finding any sort of dissonance between what has previously been 'known' and what is newly understood is what leads to lasting and meaningful change (Cole, Hinchcliff & Carling, 2022). This is particularly relevant given the subject matter of the professional learning programme, with notions of challenging the status quo and disrupting the dominant discourse of play and autism.

Six teachers participated in the pilot on the day, and throughout the morning engaged in face-to-face versions of the presentations created for the mobile app, each with a different QR code for each module's Mentimeter page, where there was a two-fold content-based question per presentation (one Likert scale based on module outcomes and a three-word response to the content of the module). At the end of the study, participants had the opportunity to self-record a critically reflective video log to provide in-depth qualitative feedback on the usefulness and efficacy of the professional learning based on their own contexts. Four participants chose to leave video logs, each indicating positive motivation and empowerment at the prospect of making change with regards to the practice of embracing authentic autistic play. Participants noted that the programme had been discomforting at times, challenging and uncertain. But they all left feeling ready to embrace authentic autistic play, beginning to consider ways that they could do that in their own contexts. Critical reflection was a vital part of this, using

prompts to go beyond superficially reflecting on what they had learned on the day, and each participant had their own way of acknowledging that they were leaving with more questions than answers, but 'in a good way'. I felt confident that the presentations have been largely effective in meeting the learning outcomes for participants to move forward with distributing the professional learning programme through the mobile app once it was fully developed. With regards to what could be done differently in the app, one participant's video log noted a query regarding access to further resources, as well as promoting teacher agency in being able to use these resources if there are barriers to this being recognised widely. Furthermore, one of the participants fed back that using a web-based resource for signposting participants to resources and real-life examples would be worthwhile if they were unfamiliar with any of the theories discussed on the day, and this was subsequently implemented through the app's sister site. Although the pilot study could not be a true indicator of how successfully the programme would run through the app, as it is a different approach to learning entirely – it lent a hand in providing insight to the ongoing process of becoming for myself and participants, and how different levels of buy-in can influence how deeply the learning resonates for both participant and researcher. It is perhaps important to note that

> the role of participants in the research process can be thought of as lying on a continuum ranging from that of passive information providers to engaged research partners who assume an agent's role.
>
> (Enosh & Ben-Ari, 2016, p. 581)

In this research, multiple roles along this continuum have existed for participants with in-app engagement varying from survey responses sharing attitudes towards different types of play on a scale of 1-5, to offering written feedback through the app's built-in rating options and comment boxes, with the professional learning programme and

critical reflection diary uploads being a step further on (with more stringent inclusion criteria) and finally interviewees offering more in-depth qualitative feedback about the professional learning programme and the research as a whole. According to Enosh and Ben-Ari (2016), when participants become reflexive agents of the research, by engaging in critical reflection of their own practice in relation to the research, they cease to merely exist as informants in the researcher's pursuit of knowledge. When this happens, the research becomes a more collaborative and social endeavour, a reciprocal partnership in shaping the becoming of the research. When the pilot participants provided feedback on the content of the programme, they were more passively exchanging information and rating its efficacy – which may be useful in more traditional research where responses to surveys, for example, are a means to an end for the researcher to exert their conclusions (Enosh & Ben-Ari, 2016). However, when the pilot participants engaged in critical reflection and began to insert their own background knowledge, skills and experiences in the data, they became agential and the research took on a different shape in light of new information and ideas.

The fluidity of actors within the research assemblage allows for a more anti-hierarchical space where boundaries and relationships fluctuate and change as the research is becoming, and in contrast to more traditional researcher/participant roles,

> this multidirectional relationship occurs when structural, relational and political upheavals in the incumbent social system initiate dynamic shifts in the liminal space, causing the liminal space and the actions of those operating within it to expand or contract accordingly.
>
> (Murray, 2019, p. 186)

As a result, within its liminal space, this research has not always been controlled or predictable in the sense that traditional research often is, and this is discussed further in the chapter on the research assemblage. But, as Murray (2019) contends that actors involved in change activities, or 'liminars', exist beyond the norms of social and political expectations – including those within academic research. Within this special research assemblage actors are free from 'incumbent system obligations' and welcomed to trouble these expectations and challenge the status quo. Unlike Murray (2019), I never set out initially to traverse the path of liminality in my research, and I believed I had a clear picture of what my research would look like and what it would entail. However, even within this belief and conviction in my chosen methodology, I had a certain hesitation in this because I did not yet have the language or confidence to pursue more fitting alternatives. In my first supervisory meeting, I problematised this issue in the best words I could at the time:

> Decisions made…
> Narrative literature review not systematic review for following reasons:
> 1. I am wanting to work within a pragmatic paradigm – what works, what doesn't, etc. This context needs a narrative approach in my opinion, not a technical, systematic approach to the literature.
> 2. Whilst a systematic approach may be the 'gold standard' for scientific research, it does not sit well with my learning style which by nature of my disabilities is rooted in autistic special interest (passion) and ADHD chaos (creativity) and the different way I process/understand information which needs to go through a variety of unconventional phases of critical narrative and is not a systematic process.
> 3. I have managed a over decade of research at masters level using a traditional/ narrative approach to literature, and I have maintained scientific rigour and effectiveness throughout. I do not feel a non-systematic literature review will affect the quality of my research.
>
> (Supervisory meeting overview, 30th October 2021)

I knew that my approach to reading, writing and thinking through the literature was incongruent with a systematic method of literature review. Without the knowledge of alternative methods and non-methods, this was the best justification I could provide at the time, using my own neurodivergent style of learning and the paradigm I knew at the time (pragmatism) to explain my stance on this. My supervisors trusted me to pursue this, and gratefully so because otherwise I would never have come across the article that changed the shape of my research just two months later. Until that point, the reading had been shaped around the themes of play, autism and attachment, building on my initial proposal for the doctoral study. As I phrased it in my first progress review with my supervisors, I had 'immersed' myself in literature but I had become quite sceptical about the reading I was finding on autism, play and attachment, based on searches using these key words. It lacked criticality, in my view, and was very one-sided, heavily dominated by behaviourism and deficits language. The previous methodical searches had uncovered a great deal of useful sources regarding the embedded views of autism and play, which can be found in section three of the literature chapter, but key word searches had uncovered little in the way of neurodiversity-affirming (or 'neuroaffirming') literature around play and autism, and almost nothing about play and attachment. I knew there were alternatives available, due to my previous research and general interest in these areas, but they were not coming up during stringent key word searches within the context of my research questions. Methodical key word searches seemed unbalanced and biased towards the dominant discourse, which should not automatically be the narrative reported in literature reviews.

Dark (2024) highlights that often the autistic community may feel that most autism research "does not reflect their personal understanding of autism" and suggests that "autistic researchers bring unique strengths to the interpretation of data" (p. 2).

I was presented with a discomforting realisation that, if I were to pursue the type of literature review that institutional and academic conventions required of me, I would not be getting the full landscape of the literature available. I felt compelled to push back on these conventions:

> And so the forces of the world change the problems we've asked of it and then change the concepts with which we've responded. The world kicks back and demands a new image of thought which can institute new concepts and a new plane… where anything can happen, we must deconstruct the traditions we inherit and do it well.
>
> (St Pierre, 2017, p. 696)

I allowed myself to pursue literature that made sense to me in the context of my research, following 'paths' of reading rather than analytical searches based on key words. This took me down what I call 'rabbit holes' of academic evidence that came from following concepts, words, signposts and citations of work that were connected to my key words (sometimes quite tangentially) but not specifically about them. Through this deconstruction of the literature available, rather than a methodical search, I was able to reflect on what the research was aiming for. In my first interim progress review I noted that:

- I began to look deeper into the literature on autistic play after Christmas 2021.
- During this literature 'immersion' I inadvertently decided to change the focus of my research
- Reading a key article about historical insights into autistic play really took hold of my interest
- Attachment was no longer a theme that I wanted to pursue:
  o I had come across a recurring query in the community – why just attachment play, why not all play?

  - There was little literature available on attachment play, and in the literature the two ideas (attachment and autism) just get conflated
  - I wanted the teachers to be the focus of the research, not to imply that the children had to change in any way, which became the assumption when discussing attachment dyads and autism
- Essentially, I wanted the focus to be on 'teach the teachers' not change the children

(Research progress report, 26th April 2022)

Deconstruction like this can happen at any time during our research, according to St Pierre (2017), even in spite of any intentions to follow a known structure or method. Deconstruction does not follow any particular rules or recipes – it is not even usually an intentional act. Researchers might simply find that they cannot ethically follow conventions even if they want to, "when the given, the dogmatic image of thought, no longer suffices" (St Pierre, 2017, p. 687). This was the first step in the amalgamation of my ethical, ontological and epistemological stances even if I did not know it at the time. Aptly, St Pierre describes a moment of transition from form to freedom:

> Perhaps it's just luck that we encounter what we need to think differently. A word, a sentence, can surely change everything. Stalled in writing/thinking… taken-for-granted ontological distinctions collapsed.
>
> (St Pierre, 2017, p. 688)

We as researchers can discover in reading, writing and thinking through literature that discourses can already be determined (and over-determined) by 'conventional' humanist thought before we start to question them. There are things that we might know intimately through lived experience that cause us to recognise a dissonance between that which we have lived through and what is written about in the literature, causing us to seek out alternative sources that challenge these narratives (St Pierre, 2017). This is what happened to me, as an autistic researcher with lived experience of play through my own childhood, raising three autistic children, and teaching autistic pupils in

schools. I questioned the accuracy and reliability of the narratives that were over-determined by conventional humanist thought within education research and sought reliable sources of information outside of this dominant discourse. The article that I encountered that changed everything, as St Pierre suggested, referred to the authenticity of autistic play in a way that no other literature had. It was the spark I needed to deconstruct the evidence in a way that found authenticity in the literature with regards to autism and play by following 'paths' of neuroaffirmitive and authentic research evidence. It might not have been systematic, but it certainly was far more rigorous and thorough than the key word search method had allowed, and it rang true to my initial intention to pursue a literature review rooted in autistic / ADHD special interest and creativity, the neurodivergent way that I process and understand information that I expressed in my first supervisory meeting.

Although it sounds messy and unorthodox to some, perhaps, the process was quite simple. Inclusion criteria for the literature became anything encountered by going down one of these literature paths – often by reading neuroaffirmitive research written by or recommended by autistic researchers, and citation-hopping to other neuroaffirmitive research – where the content became linked to authentic autistic play, inclusion, and so on. Exclusion criteria became anything I encountered that was the same as or had similar content to the literature encountered during the previous key-word-based searches at the beginning of my review. These original viewpoints are covered heavily in many of the sections that cover embedded views of autism and play as well as inclusion and children's rights within the literature chapter. A critical stance has been achieved through this approach, regardless of its lack of (conventional) method. Phan (2025)

emphasises that autistic (and otherwise neurodivergent) researchers can bring something completely new, potentially groundbreaking, to the table – but only under the right conditions for their untapped potential to be harnessed. Being inclusive towards autistic researchers means remaining mindful of the challenges faced – such as environmental and sensory barriers, communication differences, and social complexities – and providing adjustments to the working conditions and research protocols can help to overcome these (Dark, 2024). According to Dark (2024), when autistic researchers are provided with such accommodations, they have the potential to offer enhanced or alternative dimensions to the research by, for example, being able to attend to topics of interest for prolonged periods of time and having an increased or unique attention to detail. Inclusive higher education institutions must have "an appreciation of alternative communication and work styles" by "rethinking traditional academic structures and expectations" (Phan, 2025, p. 138). The lived experiences of autistic researchers might also offer heightened relevancy and empathy in interpreting the data from a different angle, according to Dark (2024). By being able to draw from personal insights as well as extensive research in their area of interest, autistic researchers are less likely to rely on the typical offerings from within autism literature and clinical evidence. Boven (2026) intimates that autistic researchers, and autistic people in general, view what is considered 'interesting' and 'relevant' differently to many others, and feel surprised or confused when non-autistic people do not see value in the intricacies and nuances of their work process, the type of activities they have undertaken, or find the product of their efforts unconventional. It can be difficult, therefore, when non-autistic researchers ask or expect autistic researchers to go against their natural proclivities within their academic work and out in the field.

Colleagues, reviewers, managers or supervisors may ask them to undertake processes, cite sources or make arguments that belie the autistic experience as perhaps the autistic researcher knows exists, but because the other researchers have potentially never known this reality they do not perceive the evidence through the lens of lived experience (Boven, 2026). Often academics can provide recommendations to autistic researchers that perhaps seem minor or insignificant to them, according to Boven (2026) but to the autistic researcher it devalues the authenticity of their work. This must be taken into account by supervisors, managers, reviewers and colleagues to be respectful of autistic researchers, but according to Lawson (2025), "the world appears to finally be listening to the voices and experiences of Autistic people" (p. 3).

Providing feedback that suggests expanding research outcomes to include 'typical' perspectives that focus less on the autistic experience (to make the data more universally relevant), for example, might seem minor to a non-autistic reviewer but when the focus of the research is on autistic ways of being it could be perceived that this dilutes the authenticity and lived experience reported in the research and highly valued by the autistic researcher. This is not bias, according to Boven (2026), but is in a sense anti-bias with "descriptive fidelity" to express the concepts relevant to the subject matter in a way that is inclusive of the autistic community and the researcher's own authenticity. As Lawson (2025) indicates, research is not simply about a reiteration of facts about a phenomenon, but to translate those facts in a way that increases our understanding of life within that phenomenon and the actions of people in relation to it. Research about autism from the point of view of someone who is not themselves autistic will always be seen from an outsider perspective, through a lens of 'typicality'.

Researchers who are themselves autistic or otherwise neurodivergent (such as ADHD) often share a perspective that is based on *monotropism* – an intense focus on a specific interest that they can channel their thoughts and actions with greater attention to detail than neurotypical researchers do (Lawson, 2025). This monotropic lens, according to Lawson (2025), can and should be incorporated into our activities of daily living to remain authentic. Autistic researchers are no exception to this, and if they are to be able to thrive in an academic environment then their processing mechanisms must be incorporated into the research that they do in a genuinely accepting and inclusive way. While an autistic researcher's interest in the subject matter may seem entirely monotropic or single-minded during the process from an outsider perspective, they are often immersed in the subject matter's relationship to other arenas and walks of life, and so it can become meaningful in relation to other concepts as well:

> when I am intensely focused on a single interest, the object of my interest is not given in isolation but as related to other aspects of experience within a field. My experience was constantly restructured in what may be called field dynamics… relational wholes that give meaning and structure to aspects of experience within the field.
>
> (Boven, 2026, p. 4)

This quite neatly explains how my early 'paths' of reading and writing were continuously restructuring and shaping the research as my review was underway – based first on a skeleton structure of dominant discourses that appeared to over-saturate the academic databases, then growing into a coherent landscape of the literature with descriptive fidelity.

Being a researcher who is/has been a teaching colleague, a teacher educator, an advocate for social justice and an activist in many ways, my outsider position in the

research became messier as I interrogated my ethico-onto-epistemology over four years, and at times wondered if perhaps

> I should be positioned inside the research rather than an outsider looking in… interviewing, reflecting with colleagues, rewatching, reading, analysing and writing created my own journey of becoming, alongside the meaning-making expedition I was on.
>
> (Calderwood, 2025, p. 267)

Allowing elements of discomfort and uncertainty for myself (something that did not come easily, as an autistic researcher who thrives on predictability and routine), and encouraging others to do the same, has led to liminality in my research for it to become "a space where transformations occur, where there are shifts in location and shifts in states of being" (French et al., 2023, p. 695). There have certainly been shifts in location, albeit virtual shifts in modes of research technology, and undoubtedly there have been shifts in states of being. Like Calderwood (2025), I found myself 'becoming nomad' in a critical posthumanist fashion and accepting my position as part of the research (but not centering myself as any sort of authority on the matter), learning and unlearning as I went along: entangled with literature, community, and technology. Intra-actions and diffractions, in the Baradian sense, explain how human and non-human actors in the research assemblage are intertwined in mutual influence, inseparable from each other, and

> this enables us to consider what is emerging rather than what is… so what is being revealed at one point in time is constantly in flux.
>
> (Calderwood, 2025, p. 266)

The liminal, fluctuating entanglements are what makes this posthuman approach 'relational' in ways that no other approach can offer. In the social sciences, particularly in practice-based research, the theories on offer often focus on relationships by nature as

> 'Social' by definition is relational… every member of a society or social world is in relation to all other parts and all other members in varying degrees of proximity over space and time.
>
> (Maller, 2025, p. 67)

Most of these have primarily limited the relational aspects to human relations, according to Maller (2025), and although many perspectives have touched upon the influences of non-human "materials and resources, other species, technologies and artefacts" (p. 67) in their research they rarely go as far as to decentre the humans within these relationships. This is what separates humanist approaches to research from posthumanist approaches – as relational as they purport to be, it will always be the human at the centre of the theoretical lens – but there is rarely a binary of purely humanist or purely posthumanist activities. It is more of a sliding scale of centering and decentering the human within phenomena, and Maller (2025) pinpoints this as determining the relative value of the human and non-humans in each circumstance.

To illustrate my personal shifts in being and becoming, my positionality statement addresses part of the journey as it unfolded, including the background that led to this position, and this can be found in the next section to round off 'setting the scene' for this research.

1.8 Extended Positionality Statement

The following positionality statement can be found online (see list of webpages at the start of this thesis) but offers an insight into setting the scene for this research and its assemblage as a whole:

> *My current position is that of a full time PhD student at the University of Strathclyde, undertaking a PhD in Applied Autism Research. My career as a teacher in Scotland spanned 15 years prior to beginning my doctoral*

research. I am an autism specialist teacher, having worked intensively with autistic pupils in multiple specialist bases, as well as over a decade in mainstream primary and support for learning roles prior to this. Prior to my career as a teacher, I worked within the early years sector across various roles in various nursery settings. I have specialist qualifications in Leading Inclusive Education (MA), Inclusive Education: Autism (MEd) and Pupils Support and Pastoral Care (MEd) and a wealth of experience in leading autism specific education and care. As an autism specialist teacher, I have gained particular expertise built on my experience in early years education and care and I consider myself to have aptitude in leading learning within the pre-early and early level of Scotland's Curriculum for Excellence, with an emphasis on play and active learning with autistic pupils.

I am an autistic researcher, and I take this role seriously not only with regards to my identity as a member of the autistic community, but also for pioneering research into areas that have thus far been explored primarily by non-autistic researchers with a different positionality to myself. I have struggled with my positionality as an autistic researcher for many years, and I felt uncomfortable with being coerced by tutors and markers into using phrases such as 'autism spectrum disorder' and 'high functioning autism' within my academic writing simply because it was the done thing, despite these characterisations being widely regarded as offensive by the autistic community. As the autistic community has gained considerable momentum in contributing to academic research over recent years, the ability to speak out against the harm caused by such linguistic terms used to describe autism and autistic people has become easier (and more easily justified through prominent peer-reviewed research from other autistic authors). As this movement gains momentum, I have found it within myself to speak within academic platforms about challenging "the status quo" and "the dominant discourse" within autism research and within an education context.

I chose play as a research field based on my professional experience as an autism specialist teacher and my professional interest in the early years and play on the whole. I was all too aware through my own personal experience as an autistic child growing up in a twentieth century culture that encouraged the normalisation of children who were in any way different, that play is not experienced in a linear, hierarchical fashion that my professional learning would have liked me to believe. As a mother of three autistic children, I saw my youngest baby grow and develop in

fascinating ways without the influence of other (non-autistic) children due to being a 'lockdown baby' during the Covid-19 pandemic. Unlike my two elder children who were 'taught' that their play was different from their peers through socialisation, my youngest played in her own way at all times and it was embraced by everyone in the household. We knew early on that she was autistic, and so this inspired me to wonder - how different would the life experiences of autistic children be if they were all allowed to play in their own authentic ways?

In the first year of my PhD, I was immersed in my own learning, reading, writing, reflecting and making sense of the connection between autism and play. As I had suspected, the vast majority of research linking the two was about intervention, correction, remediation and normalisation. I came across an article by Briggs (2019) about Fernand Deligny, and the work he did with autistic children, 'reinventing' play perspectives. This was the catalyst I needed to grow an ontology of autistic play for my research. By October 2022 I had found, through the literature, a 'shape' for my research that felt appropriately critical of established norms and my literature review demonstrated a journey through the status quo and the dominant discourse to a radical acceptance of authentic autistic play. At the time of completing my literature review and extended research proposal I was under the impression that pragmatism was the best option for my research, given my criticism of positivism in autism research and my dissatisfaction with social constructivism, and its established position within mixed methods research.

I was unaware at the time that there were alternatives that lay within the 'posts' of research philosophy. In November 2022 I had the opportunity to present at a conference through the Participatory Autism Research Collaborative (PARC). "The Hidden Gems of Autistic Play" was well received by scholars, practitioners, and the wider community and became a major milestone in developing my critical standpoint regarding the radical acceptance of authentic autistic play, and I received no pushback from the conference participants or subsequent interested parties who reached out to me. In "The Hidden Gems of Autistic Play" I shared personal recollections of my own autistic play and, based on quotes from literature around autism and play, I showed the juxtaposition between what was 'known' (or assumed) about autistic play, and what my personal reality had been. Very few opportunities had been given to the autistic community to retroactively relay their experiences of play in childhood at that point, and my work was demonstrating my intention to

allow autistic voices to be heard with regards to authentic play preferences.

Acknowledging the limitations of presenting to an almost-exclusively autistic audience, I pursued further speaking opportunities through presenting at the IPA World Conference in Glasgow in June 2023. Welcoming questions and critiques, my presentation "Authentic Autistic Play is a Human Right" was similarly well received by all who attended, and ended up repeating the presentation the next day due to a last-minute scheduling difficulty and it was again very highly regarded by all who attended (even if they were not scheduled to be attending it). Through this presentation, a global audience became engaged in the authentic autistic play conversation – with many contacting me for months afterwards to collaborate and discuss the practical and theoretical opportunities that my research is already offering. In "Authentic Autistic Play is a Human Right" I critiqued the UNCRC's assumption that play should be 'age appropriate' for any child, but in this particular context the idea of ages and stages of play was not only perpetuating ideas that any play is 'inappropriate' but also causing harm to autistic children. Based on peer-reviewed research and established sources within the literature, it was a straightforward argument that the evidence already exists demonstrating actual harm and inhumane treatment through the well-documented assumption that autistic play is not appropriate. Furthermore, I was able to collate a body of evidence through the literature that an autistic play culture exists that is qualitatively different to the play of non-autistic individuals. This argument is of vital importance to my research, and my positionality around this does of course come from my personal and professional drive to challenge these assumptions, but it is also (now) based on a solid foundation of literature and a deep understanding of my own research assemblage.

All of the elements discussed here are rhizomatic – they are inter- and intra-active within the context of my research positionality. I am an autistic researcher, but I am also a teacher, a mother, a learner, a speaker, a networker, an activist, and (through my own lived experience) an embodiment of the challenges faced exclusively by autistic humans. I acknowledge the ableism, the discrimination, the hidden agendas, and the harmful social concepts that precede my research. But I also acknowledge the good that has been done by other researchers that come before me, and I take heart that the humanistic principles that

allowed so many theories and philosophies to be taken forward in the centuries before have put me in the privileged position of being where I am today. In Critical Posthumanism, a healthy respect for the humanist underpinnings of many of today's guiding theories (and acknowledging their usefulness) is a considered approach to education research, avoiding throwing the baby out with the bathwater. My own background, too, should be embraced as part of the rhizome that led to my current positionality. I have been on a journey through the 'isms' across the years, from my (somewhat naïve, in my opinion) empiricism as an undergraduate psychology student at the turn of the century, to the underwhelming social constructivism of my teacher training and professional enquiry, and latterly the pragmatism that I half-heartedly endorsed throughout my Masters research.

Critical posthumanism itself developed through a cacophony of critical theories including feminism, queer theory, critical disability theory, anti-colonialism, and so on. Posthumanism on the whole is seemingly wildly misunderstood, based on the reactions I have received in the last few years, and until recently it has evidently rarely been seen as a credible research philosophy by the uninitiated. I cannot blame them for thinking this, I was one of them. In October 2023 I attended a lecture about critical posthumanism in teacher professional learning and the penny dropped for me that day. Recognising the relevance of posthumanism throughout the various elements of my research, including the technology-based ones, I became immediately intrigued and I knew this was the ontology that had been missing from my research. Posthumanism as a lens allows me to consider all the things an ontology should allow us to consider and more. It allows me to think about what we know, and what we do not know. But furthermore, posthumanism encourages researchers to consider what we think we know, and what we think we do not know. Critical posthumanism, in my view, filters out the wider (and potentially more radical) aspects of posthumanism that have garnered much incredulity over the years. The ideas around transhumanist concepts regarding AI and robotics, as well as apocalyptic and doomsday notions that other branches of posthumanism refer to, are irrelevant to this research and the incredulity that they garner is water off a duck's back in my case. I stand firmly behind my position as a critical posthumanist researcher.

I feel confident that I am supported by the literature in justifying this position, and I am humbled by the realisation that my own preconceived

> *notions of what posthumanism is (and is not) were wildly inaccurate and delayed my ability to find an ontology that matched my research aims and intentions. I appreciate the benefits of posthumanism being not just a simple ontology that I identify with and wish to nurture, but also an epistemology through which I can question how we know what we (think we) know and why we believe what we believe. Justifying my research through a posthumanist lens takes into account all of the ancestral beginnings of posthumanism such as postmodernism and poststructuralism and gathers together the critical perspectives of research philosophy from Foucault and Deleuze to Braidotti and Barad and puts it together within the context from which my own research has grown – my research assemblage. Having this particular theory of knowledge before engaging with the research shapes how the data will be addressed, and how the subsequent discussions will be framed. Although my methods are mixed, with a quantitative survey as well as qualitative feedback, using a Critical Posthumanist lens allows me to take on a postqualitative approach to the data. Posthumanism is the catalyst for postqualitative research, and it is a paradigm that questions the privileged nature of 'knowledge' – or in other words it questions the dominant discourse and it shakes up the status quo. It allows us to challenge knowledge without assumption of the 'ideal' human (white, able-bodied, male, etc) being the gatekeeper of said knowledge. We can 'trouble' the knowledge that precedes our own research and take the (primarily) qualitative data through a journey of meaning making and (re)construction, in order to contribute new knowledge from an alternative position of the less-privileged, more diverse identities, genders, communities, cultures and (dis)abilities. I welcome questions from anyone about the basis of my research, the foundational values of my research, and the motivations for my research – transparency is vital to ethically sound research. I do ask what I ask of everyone who discusses authentic autistic play with me, however, and that is to set aside 'the done thing' and common preconceived ideas about autism and play.*

Following on from this overview, the subsequent chapters aim to take the reader on a journey through the concepts raised in my positionality statement. Starting with the 'landscape of the literature' (so called because, as previously indicated it was not a 'review' in the traditional sense), the reader can get a taste of not only the evidence

sources upon which this research has been shaped but also the content of the professional learning programme that was central to the study and its outcomes. The 'research assemblage' chapter provides insight into the different ways of thinking and knowing and outlines the 'three wise monkeys' of ontology, epistemology and methodology in my research. Next, a chapter dedicated to the development and thought processes behind the Play Research App also highlights the classifications of play that participants learned about in the professional learning programme. The 'data entanglements' chapter gives the reader an opportunity to better understand how the data inter- and intra-acts within the research assemblage and, in a non-standard approach, diffractively outlines what would ordinarily be considered the findings and analysis of the research. The discussion chapter entails further diffraction of the data through the research assemblage as a whole, as well as the literature upon which the study was based, and finally the closing thoughts mull over the lasting impact and how to move forward from this study.

2. Current Landscape of the Literature

2.1 Inclusion in Scottish education: Children's rights and capabilities

In the United Kingdom and in countries across the world, inclusion in education has been influenced by numerous reports and policies, starting with the 'hugely influential' Warnock Report in the 70s (Murdoch, English, Hintz & Tyson, 2020), followed by the 'milestone' Salamanca Statement (Barrett, Beaton, Head, McAuliffe, Moscardini, Spratt & Sutherland, 2015), and the United Nations treaties that have been 'driving change' internationally (Couper-Kenney & Riddell, 2021). The Warnock Report in 1978 resulted in major changes to specialist provision for children with particular learning needs and disabilities, introducing the term 'special educational needs' (SEN) which was widely used in both England and Scotland (Weedon & Lezcano-Barbero, 2021). The Salamanca Statement was the culmination of the 1994 World Conference on Special Needs Education held in Salamanca in Spain, and it challenges governments the world over to reject attitudes that children with SEN and disabilities did not belong in generalised (mainstream) education, and to "endorse and prioritise inclusive education policy and practice, and to work together to support and expand provision" (Florian, 2019, p. 691). It opened up the notion of 'inclusive education' to a wider audience, and highlighted disparities in education and exclusionary practices that exist within schools and systems, according to Florian (2019), but importantly, the Salamanca Statement was rights-based and linked to wider United Nations goals for inclusion.

That every child has the right to be included in an appropriate and meaningful education has been entreated internationally for over three decades now, with the United Nations

Convention on the Rights of the Child (UNCRC) being the first binding international tool for civil, political, economic and social rights of children, having been produced in 1989 (Aldgate, 2013). Furthermore, children with disabilities have additional rights protected within the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) which is complementary to, and builds upon, the recommendations within the UNCRC and highlights that

> The inclusion of children with disabilities is a matter of social justice and an essential investment of the future. It is not based on charity or goodwill, but is an integral element of the expression and realization of universal human rights.
>
> (UNICEF, 2007, p. v)

The UNCRPD directly addresses the issue of inclusive education, building on previous directives from the UNCRC, The Salamanca Statement (and subsequent Framework) and other international standards, and implores all countries to commit to inclusive education as a goal, consider modifications to their curriculum and pedagogy, and provide access to specific supports as required (UNICEF, 2007). This reinforces the right for all children to be educated in an environment that is inclusive, on an equal basis with others, with full participation supported through reasonable adjustments where needed (Couper-Kenney & Riddell, 2021). Reasonable adjustments are defined by Milton, Martin and Melham (2016) as the alterations that can be made to their environment or experiences, enabling them to perform a 'normative practice' (daily life skills, work or school, for example) more equitably than if they were to go without this adjustment. However, "no country has succeeded in constructing a school system that lives up to the ideals and intentions of equality" (Henry, 2017, in Lebenhagen, 2022, p. 1).

Following the Salamanca Statement, Scottish legislation was brought in line with its recommendations, and the Standards in Scotland's Schools Act 2000 legislated the presumption of mainstreaming, "whereby the default position for all children is to be educated in their local school" (Barrett et al., 2015, p. 180). This principle still applies today, although thanks to the Education (Additional Support for Learning)(Scotland) Act 2004, the use of 'SEN' was replaced by 'ASN', additional support needs, and the ASL Act also broadened the categories of those requiring support (Weedon & Lezcano-Barbero, 2021).

In Scotland, the government's attempts to address UNCRC directives are enshrined in Getting it Right for Every Child, or GIRFEC, putting children at the centre of everyday practice and considering all factors that account for their wellbeing through eight 'wellbeing indicators' aligned with UNCRC articles (Aldgate, 2013). It spans healthcare, social care, and the third sector as well as considering inclusive education, and the eight wellbeing indicators of Safe, Healthy, Achieving, Nurtured, Active, Respected, Responsible, and Included (or SHANNARI as they are often colloquially referred) shape the National Practice Model and other policies that aim to achieve the most favourable outcomes for all children in Scotland (Aldgate, 2013). However, there are potential concerns that "GIRFEC is not rights-based, but focuses on the assessment of needs in relation to wellbeing indicators" (Riddell & Carmichael, 2019, p. 488) and although wellbeing and rights are two different concepts, they may have become conflated within Scottish inclusive education guidance and so one may question whether GIRFEC is actually a socially just realisation of universal rights, as per UNICEF (2007), and whether

it is *actually* ensuring the inclusion of all in education in Scotland. One issue, raised by Button (2014), that applies to Scotland and further afield, is that

> Inclusion can mean different things to different people in different settings and is perhaps in danger of becoming one of those words that come and go and lose any real meaning.
>
> (Casey, 2005, in Button, 2014, p. 4)

We therefore need to explore ways in which inclusion in Scottish education might be interpreted. To support teachers in becoming more inclusive, the Scottish Universities Inclusion Group (SUIG) in partnership with the Scottish Government and the General Teaching Council for Scotland (GTCS) created the National Framework for Inclusion (NFI) which aims to highlight what is expected of student teachers, qualified teachers, and teacher educators, in terms of inclusive education in relation to the GTCS Standards which mandate certain values, beliefs, knowledge, understanding, skills and abilities at every stage of their careers (SUIG, 2022). The third edition of the framework denotes the legislation, policies and initiatives that have informed the framework and should be considered when using the frame, which include:

- Children (Scotland) Act 1995
- Education (Standards in Scotland's Schools etc.) Act 2000
- The UK Child Poverty Act 2010
- Supporting Children's Learning Code of Practice revised 2017
- Getting it Right for Every Child (GIRFEC)
- Human Rights Act 1998
- Disability Strategies and Pupils' Educational Records Act 2002
- Curriculum for Excellence
- Children and Young People (Scotland) Act 2014
- Equality Act 2010
- Education (Additional Support for Learning) (Scotland) Act 2004 (as amended 2009)
- The Early Years Framework
- UN Convention for the Rights of the Child (UNCRC)

(SUIG, 2022, p. 8)

But it does not, however, include the UNCRPD. The UNCRPD includes principles such as "full and effective participation and inclusion in society" and "respect for the evolving capacities of children with disabilities and respect for the right of children with disabilities to preserve their identities" (United Nations, 2006, p. 5). Furthermore, Article 24 of the UNCRPD specifies what inclusive education might look like in UN countries, with very clear guidance on the expectations of trained teachers for delivering this (UNICEF, 2017). It seems unfortunate, therefore, that the UNCRPD not been considered in the NFI – a policy that is meant to support teachers to be inclusive of all children and young people, including those with ASN and disabilities – especially considering the UNCRPD's explicit goal that an inclusive education be one that "accommodates all students whatever their abilities or requirements, at all levels" (UNICEF, 2017, p. 3) with a rather similar rationale of the NFI being "to meet the increasingly diverse needs of all children within all schools in Scotland " (SUIG, 2022, p. 6).

Robinson (2025) calls upon ITE and professional learning to prepare new and practicing teachers to rise to the challenge of designing "*unique practices* in *unique contexts* for *unique learners*" (p. 17) within an inclusive education. Recently, the UNCRC (but again, not the UNCRPD) was incorporated into domestic law in Scotland, making a somewhat positive move towards shifting the legislative focus back to social justice, children's rights and a genuinely inclusive education system (Couper-Kenney & Riddell, 2021). Had the UNCRPD been incorporated, however, Scottish legislation would perhaps benefit from a firm idea of what is (and is not) considered inclusion, as found in the UNICEF guidance on inclusive education in the UNCRPD:

> Inclusion: education environments that adapt the design and physical structures, teaching methods, and curriculum as well as the culture, policy and practice of education environments so that they are accessible to all students without discrimination. *Placing students with disabilities within mainstream classes without these adaptations does not constitute inclusion.* (Emphasis added)
>
> (UNICEF, 2017, p. 3)

Little is specifically defined in official Scottish literature (such as the list of legislation, policies and initiatives found above from the NFI) about inclusion itself. Inclusion in education, and inclusive education, are often alluded to or referred to in many (if not all) of the documents from the list in one form or another using various phrases and descriptions such as "provid[ing] education for the child in question in a school other than a special school" (Scottish Parliament, 2000, Section 15), and "mainstreaming as a central pillar of our inclusive approach to education" (Scottish Government, 2019, p. 3), but rarely defined, leaving it largely open to (mis)interpretation. Olsson and Nilholm (2022) illustrate four different interpretations of inclusion within education, from different perspectives. A 'placement' definition of inclusion is where the child's 'mere presence' within the classroom is considered inclusive, and despite numerous arguments against this view (such as the emphasised quote above from UNICEF, 2017), it remains commonplace. A 'community' definition is where all children are valued and share a sense of belonging, with an inclusive community throughout, democratic and equitable for all, the ultimate inclusive education. Somewhat straddling these two definitions are the individualisation definitions, both specified and general. Whilst generalised individualisation aims to meet the needs of all pupils in the class, the specified individualised definition of inclusion focuses on appropriate placement plus meeting the specific needs of individual children with disabilities and ASN. For the purposes of this research, the latter definition is seen as the bare minimum expectation

of successful inclusion, with the community definition of inclusion being the ultimate threshold of expectation, a goal to be worked towards by all. In creating this community, the teacher

> is building a space in which all… are enabled to speak; to voice their struggles, confusions and discontinuities in learning; to have their opinions heard and respected; and to have opportunities to explore and expand their horizon of meaning.
>
> (Murdoch, English, Hintz & Tyson, 2021, p. 675)

According to Hedge and MacKenzie (2012), the Capabilities Approach as developed by Nussbaum as a social justice framework, may hold some of the answers to inclusion-related issues (such as dignity, respect, vulnerability and equalities). It was borne out of "her genuine concern to devise a theory of justice that includes groups that are frequently marginalised" (Begon, 2017, p. 3). Originally based on a similar concept by Amartya Sen, an economist, Martha Nussbaum developed her version of the Capabilities Approach from a more philosophical standpoint on universal rights, concerning the bare minimum standards of human dignity and how this can be actualised through a recognition of each person's capabilities (Nussbaum, 2011). Whilst some agreement between Sen and Nussbaum's approaches exist, one thing in particular that Nussbaum took further was to explicitly list and define ten specific capabilities to pursue, whereas Sen instead left it up to the individual person or society to determine their own values and priorities (Stewart, 2013). Sen, according to Stewart (2013), disagreed that the capability approach is a suitable framework for social justice, as a just society would pursue a consensus of values that are more contextually relevant, and a list of acceptable capabilities cannot be universally determined by one person alone. Hedge and MacKenzie (2012) argue that the central capabilities can and

should be contextually sensitive, and will fluctuate depending on interaction with the environment, although they acknowledge that not everyone interprets them this way. Core to the Capabilities Approach (for both Sen and Nussbaum) is the idea of prioritising human dignity and agency, although Nussbaum's somewhat paternalist dictation of priorities is potentially in contradiction to this (Stewart, 2013). Whilst Nussbaum's Capabilities Approach may be laudable to an extent, for potentially changing how goals and priorities can be strived for by individuals and institutions, Stewart (2013) highlights that numerous criticisms of this framework exist, preventing the approach from having the effect that Nussbaum intended. For example, the role of social and cultural norms and expectations, the role of religious beliefs and personal agency within religion, and political change such as the erosion of the welfare state, all have a potential impact on how the central capabilities are developed and are not sufficiently addressed by Nussbaum (Stewart, 2013). Despite Nussbaum claiming that her Capabilities Approach is akin to human rights approaches, it can be argued that it fails to address crucial human rights entitlements:

> Nussbaum's version of the capabilities approach fails to explain something crucially important captured in international human rights law: that every person be treated as having equal status… The reason for her failure is that the value of equality cannot be fully articulated in the language of capabilities alone. Capabilities are not the only thing that matter.
>
> (Barclay, 2016, p. 385)

Furthermore, Stewart (2013) criticises Nussbaum's limited scope for individual and community influence over the defined list and what it means for each person or the society in which they live, and calls this her 'Tiger Mother' approach which implies a strict, no-nonsense application of rules and norms in an effort to maximise success. It appears doubtful that Nussbaum's Capabilities Approach can fully account for

universal human rights when it fails to capture basic equalities that international and localised human rights conventions aim to protect and promote (Barclay, 2016), and therefore it is unlikely to successfully support an inclusive education on its own. It is perhaps valuable, however, as an addition to the current repertoire of theories guiding inclusive education in Scotland, without the need to hold it up to its original high standing as a complex philosophical framework for exploring much wider issues of social justice (Hedge & MacKenzie, 2012).

One final (and important for this research) criticism of Nussbaum's Capabilities Approach is the apparent claim that human rights are, like the ten capabilities, a simple matter of having choice, as

> Unlike capabilities, at least some human rights are neither explained nor justified by the creation of individual choices or opportunities.
>
> (Barclay, 2016, p. 96)

Using 'play' as an example of a concept that spans both Nussbaum's central capabilities and human rights (specifically the UNCRC), play should of course never have the barriers of a lack of choice or opportunity (Howard & McInnes, 2013), but equality in play cannot come from the mere access to choice and opportunity (such as simply being given a 'playtime' at school) alone (Sterman, Naughton, Bundy, Froude & Villanueve, 2020). Choices, freedoms and opportunities in play must be meaningful and personal, but often school staff may interfere with these:

> When the children found activities to play, their play was often stopped through enforcing rules, 'Ahmed, no sticks…' or through mothering actions. A teacher told Nathan, who was happily spinning around a pole with a peer, 'You are going to get sick or fall over. Go play on the grass.'
>
> (Sterman et al., 2020, p. 590)

Casey, Mackin, George, Creevy, and Stewart, (2015) found similar examples in their report on inclusive play in Scotland, with "overly strict rules for wet play and accidents… that lead to children being told off – for playing!" (p. 32). They recommended, among several other targets for a play strategy for Scotland, that teachers and other school staff are educated on the nature of free play, as well as equalities training for all members of the school community. The Care Inspectorate for Scotland released a statement on risky play for professionals, noting that play provision must take a more positive approach to risk which involves

> moving away from a traditional deficit model that takes a risk-averse approach, which can unnecessarily restrict children's experiences… to a more holistic risk-benefit model.
>
> (Care Inspectorate, online)

A concerted effort must be made to consider and follow through with children's feelings of control over their play, regardless of difference, in order to be inclusive, according to Howard and McInnes (2013), and by taking over or redirecting their activities, it then ceases to be play anymore. This is what is expected within the UNCRC, and it is this that fails to be captured by Nussbaum's capabilities. Despite seemingly being hinted at in the final capability, 'Control over one's environment' (Nussbaum, 2011), only political and material control are suggested and 'play' is somewhat limited to simply enjoying recreational activities and laughing, without any useful indication of what should be aspired to for this capability in order to be socially just or inclusive in schools.

More generally, the equalities expected in education (regardless of the framework followed) should not necessarily mean that all children must attend a mainstream school following an unmodified curriculum, but instead that an equal education may

indeed mean a specialised curriculum in a non-mainstream setting, if that space allows them the maximum dignity, support and potential for positive outcomes to which they are entitled (Hedge & MacKenzie, 2012). While some may perceive an alternative provision limiting in terms of functioning and capability, Begon (2017) highlights that there are circumstances in which individuals may ostensibly lack the functioning to perform Nussbaum's central capabilities, yet still perceive their lives to be dignified, which is after all one of the main priorities of her social justice framework. In terms of an example where inclusivity might exist in spite of the central capabilities being absent or partially absent,

> some individuals with [autism] are seemingly unable to perform at least some elements of the supposedly central functionings… yet, as the thriving 'neurodiversity' movement make clear, many individuals with [autism] do not consider themselves worse off as a result.
>
> (Begon, 2017, p. 12)

The neurodiversity movement stems from the neurodivergent (autistic, ADHD, dyslexia, dyspraxia, among others) community speaking out against the medicalisation of neurological diversity and calling for a strengths-based perspective of autism (Lefebvre, Chown & Martin, 2023). Potentially, autistic individuals thrive more when solely in the presence of other autistic people because having the same or similar social and sensory dispositions makes interacting and understanding each other easier – whereas being in the presence of non-autistic peers is more likely to lead to a breakdown in communication and interaction by having normative expectations placed on them (Martin & Milton, 2017). Therefore, the community that Olsson and Nilholm (2022) and Murdoch et al. (2021) speak of need not be a mainstream school, where not only for many children and young people the central capabilities cannot be realised, but also where the presence within such a space does not allow the dignity, humanity and

freedoms required to experience successful inclusion. Hedge and MacKenzie provide examples in which mainstream education acts in opposition to these values, and

> this may require us to think more deeply than hitherto about what inclusion and equality means. Is Alasdair's dignity best served in a school environment in which everyday noise and even laughter is anathema to his wellbeing? Is Aileen's dignity best served when she is so frequently excluded?
>
> (Hedge & MacKenzie, 2012, p. 331)

As the examples of Alasdair and Aileen given by Hedge and MacKenzie (2012) would seemingly meet the ASL Act 2004 criteria for ASN in Scotland, the threshold for successful inclusion in education would need to not only take their individual needs into account but also consider what can be done to realise their individual potential and dignity (through the central capabilities if needs be), as they are entitled to. This potentially means preventing circumstances in which they may be inhibited from developing their capabilities, such as what may be unfairly expected of them within a mainstream environment. In Aileen's case, being placed in mainstream by default has led to a 'corrosion' of her capabilities. For Alasdair, the mere presence within a mainstream environment is an assault to his senses, and a 'daily agony' but it is what his parents want and what is expected of him. Both young people have the ability and the desire to learn, perhaps, but at what cost? Is this truly an equality we should aspire to?

> To the extent that they are both being educated in a mainstream school, Alasdair and Aileen are being treated equally, but to what extent do they enjoy equal dignity with other children and what is their education doing to support their combined capabilities and achieve threshold functioning?
>
> (Hedge & MacKenzie, 2012, p. 333)

If Olsson and Nilholm's (2022) definitions of inclusion are applied to these examples, Alasdair and Aileen are experiencing a 'placement' definition of inclusion at best. And it

is not meeting generalised or specified individualisation, nor is it providing an inclusive, equitable community for all. This impedes these young people's dignity, their human rights, and in Scotland it is not only unfavourable, but unlawful. The Standards in Scotland's Schools Act 2000 explicitly stated that education must be

> directed to the development of the personality, talents and mental and physical abilities of the child or young person to their fullest potential.
>
> (Scottish Parliament, 2000, Section 2)

John Swinney, the Depute First Minister for Scotland, and the former Cabinet Secretary for Education, said himself that the mere presence of a child in a mainstream school should not be the primary indicator of successful inclusion, and it is the experiences of children that are key to a genuinely inclusive education (Scottish Government, 2019). Mary Warnock, the name behind the Warnock Report, caused 'outrage' in 2005 when she turned the tables on her own recommendations, stating that grouping 'special educational needs' into one category and expecting everyone to be integrated together turns a blind eye to individual differences that need to be acknowledged in order for successful learning to happen in schools (Hedge & MacKenzie, 2012). To treat all children the same, according to Hedge and MacKenzie, runs the risk of failing to provide appropriate supports to convert into capabilities, perpetuating disadvantage and injustice, even if focusing too much on individual differences is criticised for creating potential stigma. Instead, focusing on individual *dignity* can be key to successful inclusion, regardless of where they are most likely to learn and flourish best. Warnock reversed her initial recommendations to instead state that inclusion "should mean being involved in a common enterprise of learning, rather than necessarily under the same roof" (in Hedge and MacKenzie, 2012, p. 338), and rather than unequivocally

advocating for either mainstream schooling or specialist provision, a deeper consideration of what will maximally *enable* each child and allow them the *dignity* that will better facilitate *true* inclusion and equality, as their human rights require.

Furthermore

> The Salamanca Statement did not rule out the need for segregated special schools or call for a reduction in their number.
>
> (Robinson, 2025, p. 14)

Returning to the idea of play not just as a capability but as a human right, whilst the UNCRC requests that inclusive spaces should be made available to all children, including those with disabilities and ASN (Committee on the Rights of the Child, 2013), inclusive education should not just be about providing opportunities or time to play, but

> it is about creating the conditions for play… it requires that we support children's ability to play, create opportunities for children to be playful, and understand that play is where children are able to exercise choice and control.
>
> (Howard & McInnes, 2013, p. 195)

All children and young people in Scotland should be able to *enjoy* (not just access) high quality play opportunities, including free play, every single day within education, and those with ASN and disabilities should be given the support and understanding they need to positively engage in play (Casey et al., 2015). Children with ASN and disabilities face barriers to inclusive play in part due to a lack of skilled staff, purported additional costs, and a number of attitudinal issues, according to Button (2014), but given that the term 'inclusive play' itself appears to mean different things to different people the perceived barriers can vary accordingly. However, one way to summarise inclusive play that appears to fit with the preferred 'community' interpretation of inclusion, is the children's equal right:

> - To full, satisfying play in their day-to-day lives;
> - To make choices about which, if any, local provisions they would like to take part in;
> - To play provision which adopts to the changing needs of the children rather than expecting the children themselves to "fit in"
>
> (Casey, 2005, in Button, 2014, p. 7)

The Committee on the Rights of the Child (2013) expresses concern about the challenges faced by children with disabilities and ASN to enjoy play opportunities, and the particular barriers of creating time and space for spontaneous play and creativity, and a lack of positive attitudes towards this. Within education, school staff must start recognising that play should be valued as both a child's right and also a means of enabling their own development (Committee on the Rights of the Child, 2013). Awareness-raising among professionals and peers at school is essential, so that children with ASN and disabilities can be equal and active partners in play, and

> Pro-active measures are needed to remove barriers and promote accessibility to and availability of inclusive opportunities for children with disabilities to participate in all [play] activities.
>
> (Committee on the Rights of the Child, 2013, p. 16)

The incorporation of the UNCRC into Scots law now means that all articles, including those most relevant to play, have to be considered not just in play policy, but across all national and local policies (Scottish Government, 2025). Scottish public bodies and organisations should now try to work towards a goal that children have places that provide "safe, welcoming and inclusive play opportunities" (Scottish Government, 2025, p. 6) and this should encourage professionals to consider what 'safe', 'welcoming' and 'inclusive' means for the children in their settings by considering the literature exploring these concepts here. More about play in a Scottish context can be found in the next section.

2.2 Play Pedagogy in Scotland

Children and young people know what they do and do not want in their learning environment, and according to Fraser-Smith, Morrison, Morrison and Templeton (2021), children often request kinaesthetic learning with a particular emphasis on play. In their study, Fraser-Smith et al. (2021) asked secondary pupils in Scotland to consider their ideal and non-ideal primary school experiences, and one of the elements highlighted for a non-ideal school was a lack of play and fun, with 'boring' schools being described as "no fun" and "not very playful" (p. 60). Conversely, an ideal school for primary pupils in Scotland would have the choice of playing "whatever you want" (p. 65) and children would be able to play together or choose their own type of play activities. Martlew, Stephen and Ellis (2011) found not only that children's views of ideal learning activities differed from teachers' views, but also that they valued autonomy and choice particularly highly as being key to engaging with the curriculum in Scotland. Despite having one of the lowest school starting ages in Europe, Scotland has traditionally had a teacher-centred pedagogy at school, in direct contrast with early years establishments which are more child-centred (Martlew et al., 2011) and in Scotland, play-based. Teachers in primary schools can use play to develop pedagogy based on either 'curriculum-generated play' to teach specific skills, and 'play-generated curriculum' which is responsive to the children's preferences, but

> while play is considered to be an important element in an early years environment, many primary teachers are unsure how to plan for such a curriculum.
>
> (Martlew et al., 2011, p. 73)

Connecting play with learning and teaching requires understanding and awareness of different types of play, as well as the role of adults in various scenarios – play needs scaffolding as appropriate but also opportunities for free, uninterrupted exploration (Arnott, Lamb, Milligan, Connor & Grogan, 2020). Lack of confidence in this can lead to teachers feeling unsure about organising a curriculum based on play in the primary classroom, and potentially revert to adult-led practice, according to Arnott et al. (2020), and primary teachers in Scotland would benefit from "more opportunities to develop knowledge and confidence with play-based pedagogies, particularly in relation to supporting free play" (p. 48). Teachers registered with the General Teaching Council for Scotland (GTCS) do not require to have formal learning in play, and there are notable differences in those who do, and tend to be 'afforders' of play, and those who do not, and are more likely to be 'allowers' of play (Audain, 2016). Despite having the same targeted level of learning and play both prior to and after starting school, the expectations and understanding of this are different in each, generally:

> While the content of the 'early level' of Curriculum for Excellence in both the nursery tradition and the P1 tradition are generally well understood… 'how' to deliver the curriculum was understood differently, resulting in discontinuity in pedagogical practices… in their learning experiences.
>
> (Burns, 2022, p. 12)

Burns (2022) notes that primary teachers' tendencies towards 'predominantly didactic' approaches to teaching results in play being minimised in Scottish schools, but there is scope for addressing understanding through professional learning. There is future scope for a course on play to be developed for teachers in Scotland, according to Audain (2016), and ideally the GTCS would endorse this through their accreditation scheme. McKendrick (2019) states that promoting an understanding of play among

professionals is an important pre-cursor for establishing a play pedagogy in Scottish education, and without a shared understanding, play as pedagogy will continue to be challenged in schools as often its value is decried. It should never be assumed that all professionals fully appreciate the contribution that play makes to each child's learning, according to McKendrick (2019). It has always been generally assumed in Scotland that when children start school, they should start focusing on 'the 3Rs' of read, write, and reckon, from the beginning, much earlier than many other countries (Palmer, 2019). Good practice in play pedagogy can be shared amongst professionals to better convince the 'naysayers', as McKendrick (2019) suggests that the practice of play pedagogy is what matters most, although the theoretical base of course makes a helpful contribution. It all comes down to how and what the adults do to maximise play and learning, after all:

> Pedagogy of play… is defined broadly as the ways in which early childhood professionals make provision for play and playful approaches to learning and teaching, how they design play/learning environments, and all the pedagogical decisions, techniques and strategies they use to support or enhance learning and teaching through play.
>
> (Wood, 2009, p. 27)

In Scotland, play pedagogy is now becoming increasingly supported and is endorsed by local and national policy as well as wider links to global priorities for children and their right to play and learn (Hamilton & Wood, 2020). Whilst playful approaches are the norm in pre-school early years education and care, it is becoming more prominent within early primary stages (Primary 1 to Primary 3) and there are ongoing calls for a 'kindergarten stage' in Scotland to span from age 3 to age 8 to develop play pedagogy across the early years of childhood (Palmer and Johnston, 2021). This early childhood stage of up to 8 years is a peak time of growth and brain development, qualitatively

different to the rest of childhood, and is most readily developed through play mediums (Palmer, 2019). More specifically:

> P1 to P3 spans a critical stage where through play, children can develop the ability to think, reflect and reason.
>
> (Hamilton & Wood, 2020, p. 6)

Play in the middle and upper stages of primary school should not be forgotten, though, according to Douglas, Frew and Blain (n.d), who found that older children also preferred a play-based approach, but there is little emphasis on play beyond the age of 8 in practice or in research. It is scarce, but not completely absent:

> Finding research on the effects of play-related learning on older pupils is hard to find, but there is some out there… highlighting the fact that the positive effects of play can be felt by learners of all ages.
>
> (Simpson, 2024, p. 19)

In spite of the possibilities, there continues to be an expectation that the 3Rs, encompassed within literacy and numeracy priorities of Scotland's Curriculum for Excellence, will take precedence over play from P1 to P7, which often overrides the views of early childhood specialists who recognise its value (Palmer, 2019). Many adults in wider society have long seen play as a trivial pursuit, but its importance has been becoming increasingly more accepted in the last few years, and 'on paper' at least, play pedagogy as a whole is now in a better position to be rolled out across Scotland (Hunter Blair, 2021). The Scottish Government released *Realising the Ambition: Being Me* in early 2020, which is a "splendid document… recommending play-based pedagogy across the early level" (Palmer, 2021, p. 15) but fails to address the full (pre)birth to eight range of early childhood. There is still a considerable amount to be done to make sure

these children can access a play pedagogy, and "translating documentary rhetoric into real-life practice can be extremely challenging" (Hunter Blair, 2021, p. 41).

One way to overcome these challenges, according to McCabe (2021), is a commitment to high-quality professional learning opportunities, and in doing so establishing a play pedagogy as the 'long game' among early years staff and with system leaders, and this "guards against any idea that play pedagogy can be passed off as a twinkly 'here for now' initiative" (p. 79). Since 'pedagogy' is the tool kit that professional educators use, which includes their learning and teaching philosophies, their knowledge base, and the range of methods they have for acting on these, professional learning opportunities can potentially be the way these toolkits are prepared and topped up, and without preparing these toolkits specifically for play, aspirations of rolling out a play pedagogy will likely to be limited (Ryan & Northey-Berg, 2014). One key element of professional learning in play pedagogy, according to Ryan and Northey-Berg (2014) is coming to the understanding that play often takes different forms to what may be expected by teachers, and using this knowledge to allow autonomy over play choices, and policies where only certain types of play are promoted and accepted should be avoided. A play pedagogy should by nature be inclusive of all, including those with additional support needs (ASN) and disabilities, and "no child should be excluded or feel that they do not belong just because they are different" (Henderson, 2021, p. 65). For example, participation and engagement in play need not be measured by joining in with others, as some children prefer solitary play (despite some perceptions that solitary play as described by Parten in 1932 indicates a lack of involvement), and sometimes solitude may be perfectly appropriate for that individual to absorb their environment and learn from their play

(Gibbs & Cooper, 2014). When observing play provision, professionals may often note "there are children who flit around on the margins and are rarely engaged in play or play with others" (Casey, 2010, p. 7) but there is no right or wrong when it comes to play. Children with ASN can, through play, be themselves, create their own meaning-making and gain their own individual satisfaction from playing their way (Casey, 2010). With a long history of children with ASN and disabilities such as autism having their play compared to their peers and subsequently intervened with, Nind, Flewitt and Theodorou (2023) propose that the time has come to reconsider how play is defined and constructed for each individual and allow every child to have agency over their play, no matter their perceived challenges, instead of "a dominant discourse of the disabled child as a non-playing object that requires professional therapeutic intervention" (Goodley & Runswick-Cole, in Nind, Flewitt & Theodorou, 2023, p. 344). According to Button (2014), attitudes are among the main barriers to play for disabled children in Scotland, as well as a lack of skilled staff. Most professionals work in teams who come from different backgrounds, values and experiences and beliefs about play and inclusion, and sometimes falling back on common knowledge such as policy and legislation might be the only way to navigate the tensions between the theory and practice of inclusive play pedagogies (Casey, 2010).

John Davis, a former Professor of Education who researches and writes on a range of issues including childhood, disability, inclusion, social justice and anti-discrimination, wrote in his blog on play and inclusion in a Scottish context that Scottish Government policy documents such as *Building the Ambition* seek to

> remove artificial age and stage boundaries and promote the notion that early learning and play pedagogy should attend to the issues of children's rights, equal opportunities, responsiveness (to children's perspectives) and relationship building.
>
> (Davis, 2017, online)

Similarly, Gibbs and Cooper (2014) note that professionals should be able to acknowledge and embrace each child's contribution based on their own preferences at that particular stage in their life, and express play in their own way regardless of perceived development, in order to be inclusive. To do so,

> we can embrace play that challenges our preconceived notions and invites us into new thought… respectful interpretation of… autistic children at play in their own surroundings, perhaps we can better serve the children in our care and facilitate authentic autistic play.
>
> (Guthrie Stirling, 2025a, p. 137)

In doing so, teachers could effect change not only on an individual level for that child, but potentially at a wider institutional or systemic level through their own reflective practice (Gibbs & Cooper, 2014). Some continued professional learning (past what is taught in ITE and early years courses) can allow the adult learners to analyse their own contexts, question children's participation and perspectives, and evaluate the extent that their own professional practice enables the children to achieve their own aspirations rather than those of the adults (Davis, 2017) and "qualifications should be seen to be not the end but the start of an individual's professional learning journey" even though learning about play is currently optional (Audain, 2016, p. 22). Adults are generally presumed to be able to override decisions about play if they believe it to be appropriate and deny the child their rightful opportunities to act as agents in shaping their own play, but professionals should be able to learn to embrace autistic play and value the intrinsic worth of natural play in autistic children through critical reflection of their own practice (Guthrie Stirling, in press). Professionals engaging in a play pedagogy

in Scotland should reflect critically on their own preconceptions about play and inclusion and push beyond rigid regimes and process that may come from colleagues and managers, to understand where each child is in their play journey and embrace play for play's sake in their own practice (Davis, 2017).

2.3 Embedded views of autism and play interventions

Autism discourses, according to Milton, Rideout, Kourti, Loomes and Martin (2023), have predominantly stemmed from "dehumanising and infantilising medical models" (p. 86) that have amounted to violence against the autistic community. This can potentially be seen largely as a result of capitalist influences on research from medical research councils funding interventions and for-profit organisations that benefit from autism being viewed as a disorder in need of remedy (Milton et al., 2023). The education of autistic children has been governed primarily by behavioural and cognitive approaches and much of the policy and practice that followed this has been based on these embedded views (Martin & Milton, 2017). Kanner and Asperger first detailed descriptions of 'autistic aloneness' and 'insistence of sameness' over 70 years ago, according to Dyck and Russell (2020), and "essentially the [autism] diagnosis depends on a deficits-based description of a person" (p. 171) using only behavioural markers to diagnose it but relying heavily on culture, context and their own individual values to come to that conclusion. This creates a concern that the diagnostic criteria have been influenced by those with a 'vested interest' in treatments and are susceptible to gatekeeping and pathologizing (Dyck & Russell, 2020). Autism has often been viewed as a purely medical condition, a tragedy, akin to any other disease that needs to be cured (Chapman & Bovell, 2022). According to Milton (2014), this is the one thing that does

not, and will not, work. However, in the leading diagnostic manual and in general practice, according to Chapman and Bovell (2022), autism has been seen to create behavioural problems stemming from dysfunction of the individual – a spectrum disorder associated with "social and communication issues couple with highly restricted and repetitive habits, actions and routines, and sensory sensitivities" (p. 4), as well as somewhat harmful deficits and impairments of empathy and cognition. This view led to behavioural-based approaches to autism, with the dominant models often being based on the work of behaviourist Lovaas and his colleagues and are, as Chapman and Bovell (2022) suggest, highly controversial and potentially harmful.

In 2011, the obituary of Ivar Lovaas described how his work "revolutionized the treatment of autism" where it had "previously been considered untreatable" (Koegel, 2011, p. 227). The American Psychological Association (APA) tribute suggested that his work challenged ideas that the 'disorder' was 'hopeless' and despite encouraging practitioners to use 'extremely punitive' measures including electric shock to 'motivate' autistic individuals, his work has been considered 'remarkable,' 'groundbreaking' and 'profoundly important.' Koegel (2011) goes on to suggest that Lovaas' work is firmly established within autism practice and "literally all current treatments for autism trace either a primary or secondary dimension… to his crucial foundational research" (p. 227). At 83 years old, he died having purportedly shaped the lives of practically every autistic child in the world, according to Koegel, with much of his work being known by education and psychology professionals (as well as 'laypersons') across the globe through his contribution to the creation of applied behavioural analysis (ABA). Any insight into Lovaas' generally practiced methods, even without the original 'extremely

punitive' measures, gives a taste of what Chapman and Bovell (2022) referred to as controversial and harmful, for example:

> The Lovaas approach is a form of applied behavioural analysis in which the Lovaas trainer models to the child a skill to be mastered, such as placing one brick on top of another, and then encouraging the child to replicate the action… Eye contact is requested using a prompt of tilting or directing the child's head if necessary, and the request for the child to complete the task is repeated until success is achieved. Success is always positively rewarded, often by a small item of favoured food and activity-specific verbal feedback, such as 'Good brick building!' For the child who fails or does not wish to attempt the task, a firm verbal comment can be made, such as 'No!'… In the early stages, this may result in bouts of continued screaming and constantly leaving their seat. The trainer would reposition the child at the table.
>
> (Wall, 2010, p. 85)

The glowing tribute made to Lovaas in his obituary highlights how embedded notions of autism paint the 'treatment' of autism as a noble and necessary endeavour without which the lives of autistic individuals would be adrift and without 'normal' life functioning. His notoriety as some nobleman of autism intervention somehow follows being a man who made statements such as "you start pretty much from scratch with an autistic child" and going on to say "you have a person in the physical sense – they have hair, a nose and a mouth – but they are not people in the psychological sense" (Lovaas, 1974, in Botha, 2020, p. 5). For those who hold a different viewpoint about Lovaas' work, and about ABA in general, such as autistic researchers and professionals, instead of a glowing tribute, this academically published obituary serves as a reminder of the uphill battle against the type of views perpetuated by followers of Lovaas and ABA, as well as "the cliché of ABA being the only 'scientifically proven' intervention" (Mottron, 2017, p. 815).

Despite ABA being extolled as gold standard, it and other similar interventions focus on deficits, remediation, and cure, being rooted in a medical model that strives to 'normalise' the individual to act more like others (Botha, 2020). The medical model

> assumes that the goal of service provision or 'treatment' is to restore autistic people to normalcy, or, as Lovaas puts it, indistinguishability from peers.
>
> (Kapp & Ne'eman, 2020, pp. 188/189)

ABA, according to Dillinburger and Keenan (2009), is based on over 100 years of research, and its underpinnings can be found in the history of behavioural psychology, such as Skinner's operant conditioning. It aims to generate measurable change in human behaviours, and although it is not specific to autism, thanks to it being credited to Lovaas and his approach, it has come to be "mistakenly categorised as a therapy for autism" (Dillenburger & Keenan, 2009, p. 194). Interventions such as Picture Exchange Communication Systems (PECS), Pivotal Response Training (PRT) and Early Intensive Behavioural Intervention (EIBI) are often listed alongside ABA as the known 'therapies' for autism, yet ABA actually laid the very foundations that these techniques were built upon (Dillenburger & Keenan, 2009). The 'vast array' of approaches that are based on ABA vary widely, and some are even at complete odds with each other (Milton, 2014). ABA is often seen as a 'traditional' approach to autism intervention, with numerous more 'contemporary' approaches cropping up that purportedly cross-fertilise with behavioural practices, such as developmentally-based programmes that 'infuse' ABA tenets into their makeup, creating a continuum of interventions that are more or less based on ABA approaches (Prizant, Wetherby, Rubin and Laurent, 2003). With these cross-infusions, the theoretical basis for the interventions remains rooted in the behaviourist camp, with a core belief that "the less autistic the child is at the end of the

intervention, the more successful the intervention is" (Mottron, 2017, p. 816). However, the underlying principles, the efficacy, and the ethical justifications are now being widely questioned (Mottron, 2017), and ABA in particular faces considerable scrutiny (McGill & Robinson, 2021). Dawson and Fletcher-Watson (2021) report on earlier reviews of interventions that indicate the research behind ABA and ABA-based interventions rarely, if ever, considered adverse outcomes or harms of their interventions on autistic individuals, nor were such factors ever documented or reported against the benefits that the studies purportedly evidenced. Persons coming forward to report negative consequences of ABA were either "ignored or dismissed as 'radicals,' 'too autistic,' or 'not autistic enough' to speak for their own community" (McGill & Robinson, 2021, p. 270). Often such debates are 'hidden from view' within the field, giving the misleading impression that everyone agrees with such approaches (Milton, 2014). According to Williams (2018), those working "within the contemporary ABA community… would like to distance themselves from a history of violence" and despite claims that it has moved on from how it started with Lovaas and no longer condoned such things, "there is no way to separate Lovaas's work from ABA literature… [or] Lovaas's opinions of autistic children from his work" (p. 70). The poor standards and hoodwinking, according to Dawson and Fletcher-Watson (2021), demonstrate the bias and deceit that has plagued autism research and the practices that were subsequently deployed, as well as perpetuating notions that autistic pain, fear, distress, sadness and excited mannerisms are problematic or challenging behaviours that need to be extinguished, rather than genuine emotional responses to harmful practices. Consequently, "disregard of harms has in turn wrongly been interpreted as evidence of

no harms" (Dawson & Fletcher-Watson, 2021, p. 2) and the resultant practices have gone unchecked for decades.

It is now common for ABA proponents to rebut critiques by suggesting that "ABA isn't like that anymore, ABA is gentle now" (Williams, 2018, p. 70). The ABA 'industry' (seemingly rooted in capitalism, see Psarologaki, 2023 and Milton et al., 2023) has hit back at criticisms by claiming that ABA is now born-again with a new and improved ethical code that contains language regarding dignity, respect and self-determination (Allen, Mellon, Syed, Johnson & Bernal, 2024). Noting that "Neurodiversity is a term that describes the many ways that human brains process information" (p. 4) Allen et al. (2024) state that many ABA proponents have refuted claims from neurodiversity advocates that its practice is unethical, ableist and discriminatory. Taylor, Stansberry Brusnahan, Farrell and Fuller (2024) suggest that behaviour analysts need to 'lean into' their own biases and assumed stereotypes surrounding

> diverse backgrounds (eg. age, disability, ethnicity, gender expression/identity, immigration status, marital/relationship status, national origin, race, religion, sexual orientation, socioeconomic status).
>
> (Behavior Analyst Certification Board (BACB), in Taylor et al., 2024, p. 198)

Despite autistic identities being increasingly recognised as cultural (Maskit & Fultner, 2025) it would appear that, ironically, when arguing for cultural humility and awareness, Taylor et al. (2024) appear to have lacked enough of both to consider the autistic cultural identity and neurodiversity movement that Allen et al. (2024) at least acknowledged. These two articles from early 2024 both make claims that ABA is now reformed (and respects the diversity, culture and voice of the autistic community) but

seemingly cannot agree on what that reformation amounts to. This is despite admitting that:

> Criticisms of ABA reflect the professional's failure to respect variations in human behavior that are central to Neurodivergent identity: as a result, the dignity of individuals is not protected and unintentional harm results.
>
> (Allen et al., 2024, p. 13)

While both papers confirm bias indeed exists, they claim humility and critical self-reflection of ABA practitioners can overcome any criticisms against ABA and the practices can therefore continue. Concluding that it is essential to have an awareness of diversity, bias and discrimination, Taylor et al. (2024) appear to describe a tokenistic conscientiousness of 'diverse cultural backgrounds' only in the context of "racial and ethnic disparities in the everyday lives of people of color" (p. 197), not autism-related cultural and social identities. They explicitly describe the 'characteristics of autism' that contribute to the behaviours observed (found in the previous version of the model they describe) as a separate concept from the need to examine implicit biases around cultural and social identities. The "ABC Iceberg" upon which Taylor et al. (2024) developed their own "ABC Diversity Iceberg" was based on a deficits lens of autism, and this so-called reform appears to be a tone-deaf attempt at hushing criticisms of ABA and largely fails to address the majority of ethical responsibilities laid out in the BACB code they quoted. The ongoing research, practice and promotion of ABA in recent years continues to fail the autistic community through ableist and discriminatory views that persist even in the 'new' ABA. Allen et al. (2024) insist that the autistic community and neurodiversity movement's concerns are "critical of ableist practices and not the principles of behavior" (p. 16) thus the application of behaviour analysis can persist. However, behaviourism itself is a 'deeply flawed' and harmful viewpoint at its core,

according to Maskit and Fultner (2025), and is fundamentally incompatible with respecting autistic identity. The autistic community's rejection of behaviourism (and thus 'the principles of behaviour') is rooted in ABA proponents' 'wilful ignorance' of its impact on autistic children's affect, its extinction of autistic expression through coercion and compliance, whilst lived experience testimonies, research and social media campaigns have uncovered substantiating evidence of the harm to mental health and emotional wellbeing (Williams, 2018). Recognising an autistic way of life and accepting the unique characteristics of sensory and social being for autistic people should take precedence over any attempts to modify an individual's behaviour in order to be genuinely neurodiversity affirmative (or 'neuroaffirmitive') in supporting them. Maskit and Fultner (2025) highlight that, while many autism theorists are not behaviourist (such as Simon Baron Cohen, a 'person non grata' for autism advocates), the framing of autism as a disorder from cognitive or developmental viewpoints just serves to facilitate the use of ABA as an intervention. This is because theories such as 'Theory of Mind' (ToM, where autistic people purportedly struggle to understand or interpret the thoughts of others) mutually reinforce the ABA industry where separate paradigms come together in unity against autistic identity and culture, according to Maskit and Fultner (2025). Furthermore:

> claiming that Autistics lack ToM and therefore misunderstand non-Autistics obscures the fact that the misunderstanding is mutual... Autistic people and non-Autistic people have a mutual misunderstanding.
>
> (Maskit & Fultner, 2025, p. 145)

Autistic people and non-autistic people have an 'interpretive dissonance' that leads to non-autistic adults and peers failing to recognise or understand the pursuits of the autistic child (and vice versa) resulting in a disjuncture between them (Guthrie Stirling,

2025b). Having an understanding of this Double Empathy Problem (See Milton, 2014, 2016; Milton and Bracher, 2013) in the context of play can go some way in supporting autistic children more authentically and, whilst not fully understanding their play is perfectly acceptable due to interpretive dissonance, "not allowing this, is not acceptable and is a breach of their human rights" (Guthrie Stirling, 2025b, p. 317).

Play is one aspect of an autistic child's experience that is particularly vulnerable to being targeted with interventions, with the embedded idea that "professionals and caregivers may identify delays and seek to facilitate early play skills through early intervention strategies" (Wilson, Carter, Wiener, DeRamus, Bullock, Watson, Crais & Baranek, 2017, p. 10). Autistic play is fundamentally different to the play of non-autistic peers and, notably, to peers at a similar skill level in terms of language and cognition due to Down Syndrome or learning disabilities, for example (Westby, 2022; Kossyvaki & Papoudi, 2016). Thus, differences cannot simply be explained away by 'disordered' development. Conventional developmental sequences such as solitary play, parallel play, group play, and so on, do not necessarily apply to autistic children, and

> research indicates that children with [autism] differ from [typically developing] children in all of the aforementioned aspects of external play performance as well as the internal experience of playfulness.
>
> (Westby, 2022, p. 333)

Despite these differences being unique to autism, instead of being celebrated as such, they are perceived instead to be 'lacking,' 'limited,' 'odd' and at a 'lower level' than their peers (Papoudi and Kossyvaki, 2018). The literature on autistic play, much like that of autism in general, is largely based on the medical model, and according to Lang, O'Reilly, Rispoli, Shogren, Machalicek, Sigafoos and Register (2009), "play is an

important area of intervention" and "this focus is important because children with autism are known to have more profound and global deficits in play" (p. 482). Play is a central component of many behavioural interventions, and although many have primary goals of developing language, cognition and social skills, some focus on developing play skills in particular (Westby, 2022). Founded on ABA principles, many play interventions attempt to 'teach' basic acts of play, according to Papoudi and Kossyvaki (2018), and "these notions… specifically in the development of play, have become the core of psychoeducational models" (p. 10) with the belief that (similar to Lovaas' 'noble and necessary endeavour') children will not reach their full potential without adults intervening in their play efforts. Of less concern, it would appear, is notions such as pleasure, fun, creativity, diversity and inter-subjectivity (Kossyvaki & Papoudi, 2016). Children are instead offered a 'pleasant consequence' if they demonstrate the target play behaviour, rather than the play itself being intrinsically pleasant (Lang et al., 2009). According to Rust and Thanasiu (2019), "children, including those with [autism], are intrinsically motivated to engage with others if those interventions are enjoyable" (p. 191) and while some interventions are different to ABA in their methods and targets, the focus remains on correcting deficits in play rather than allowing play to be enjoyable in its own right. The goal of play-based interventions, according to Rust and Thanasiu (2019), is to correct the 'developmental lag' of autistic children's play, as well as the qualitatively distinctive characteristics of their play. Despite claiming to be in the best interests of the child, these interventions and many others perpetuate the same notion that autistic play and associated behaviours are rife with problems to quash and struggles to overcome (Rust & Thanasiu, 2019). The issue with many autism interventions (not just the most dominant ABA and ABA-based approaches) is that they

are fundamentally flawed simply by holding these views, according to Chapman and Bovell (2022), and

> in attempting to steer someone away from their core identity because it clashes with restricted and oppressive social norm… [it] seeks to normalize autistics instead of helping them achieve self-actualisation.
>
> (Chapman & Bovell, 2022, p. 1526)

There are efforts in Scotland to overcome such barriers to play through inclusion and acceptance and seek to provide a "connected approach to quality and equality in play… to reduce the negative factors which hold back high-quality play opportunities" (Casey, 2015, p. 2). Such efforts not only call for the age-old goals of making autistic children indistinguishable from their peers to be 'jettisoned' (Milton, 2014) but "making the choice to embrace and encourage their authentic play is the only humanizing choice to make in the circumstances" (Guthrie Stirling, 2025b, p. 317). The next section considers this authentic autistic play in more detail and leads on to some historical insights of autistic authenticity in a play context and how this approach can be applied within education.

2.4 Authentic autistic play

There is a 'dearth' of literature on autistic play that truly captures the children's own dispositions and preferences in an authentic way, with most research having persistently focused on non-autistic, adult-orientated views of play and autism (O'Keeffe & McNally, 2025). Generally, typicality is persistently viewed as better, but we have to avoid falling into the trap of assuming the so-called 'normal' is best, according to MacCormack (2020). It is being recognised now that "we too often seek to mould the behaviour of children with [autism] into that which is typical" (Howard & McInnes, 2013,

p. 184). Even when play is not typical, according to Gerber (2017), children must benefit from freedom and internal motivation in their actions in order to experience *authentic* play. Practitioners and researchers ought to stop designing programmes of intervention to make autistic children 'normal' and start making programmes to make their lives better – anything other than this fails to make meaningful changes in the lives of autistic children, often being designed to accomplish the wrong goals according to MacCormack (2020). Many categorisations of play and play frameworks are designed around normative presumptions, based on observations of neurotypical children's play (as opposed to that of 'neurodivergent' children such as those who are autistic), according to Hancock (2020). Generally, neurotypical children do not demonstrate the same play actions as autistic children, or potentially practitioners and researchers have a preference to extinguish or alter the play actions of autistic children, and therefore such play is not illustrated within measures of successful or acceptable play behaviours (Hancock, 2020).

Measures of 'acceptability' that suggest any idea that those without ASN are better at an activity (or suggest that not having these needs is something to be seen as aspirational) perpetuate 'ableism', a kind of discrimination favouring non-disabled people, harming those with disabilities in the process (Janik-Blaskova & Kilgour, 2025). Every pupil's own play characteristics must be not only be valued in schools, but they should be celebrated, and

> if we are to value the power of play, then we also need to ensure that we avoid ableist mindsets when it comes to planning our environment and resources.
>
> (Janik-Blaskova & Kilgour, 2025, p. 51)

An example of this might be expecting an autistic child who is noise sensitive to manage a busy classroom environment without considering potential supports and adjustments that could be put in place to help them thrive, rather than survive, in class. Similarly, as well as each child's play preferences being embraced, so must their personal responses to their *opportunities* for play. Not every autistic child will need or respond to supports and adjustments in the same way as other autistic children. In terms of legislation and policy for schools and teachers, 'reasonable adjustments' become invaluable for inclusive practice. This is the duties to take steps to avoid putting the child at a substantial disadvantage compared to their (non-autistic, non-disabled) peers through accommodations surrounding policies, practices, aids and resources (EHRC, 2023). Inclusive play environments at schools by law have to be planned around individual needs but adjustments can be made that become universal for all pupils, according to Janik-Blaskova and Kilgour (2025), as long as they achieve the same genuinely inclusive ends as any individualised supports would. This can potentially maximise peer interactions with non-autistic, non-disabled peers, allowing them to play together in the same environment whilst continuing to practice anti-ableist and sensory-friendly inclusive play in school (Janik-Blaskova & Kilgour, 2025).

Within the United Nations, thanks to the Convention for the Rights of the Child (UNCRC), the right of a child to play has legal standing (Children and Young People's Commissioner, 2021; Howard and McInnes, 2013; Eisele and Howard, 2012, etc). Although Mulder, Graf and Carter (2019) point out that Article 31 of the UNCRC presumes that play must be age-appropriate (which may not always be the case for autistic individuals), there is an understanding that play should be recognised as being

intrinsically motivated, freely chosen, personally directed, consisting of their own ideas and done in their own way to their own ends (Howard & McInnes, 2013). In some settings however, true play may have been lost – for example, using 'play' activities for targeted intervention, or seen as something that can be removed as punishment or given as a reward on a whim (Mulder et al., 2019) – and there are concerns that potentially practitioners and researchers may have lost sight of why children play and indeed what play really is (Luckett, Bundy & Roberts, 2007). According to Howard and McInnes (2013), a concerted effort must be made to ensure that choice, control, and freedom in play are maintained at all times, regardless of disability or difference, and staff should be trained in understanding that this should be done inclusively, and how. An inclusive play environment must have flexible, child-centred practices in place, responsive to individual needs, and facilitate freedom over what, where and with whom the child plays (Howard & McInnes, 2013). Additionally, inclusive play could mean that measures of successful or acceptable play should also include play actions and behaviours commonly displayed by autistic children, and not solely those most often demonstrated by neurotypical children (Hancock, 2020).

Play and fun should not be sacrificed for neurotypical assumptions, according to Papoudi and Kossyvaki (2018). For example, they refer to an autistic woman called Rose who discussed her tendency as a child to kick other children to make them go away, as being asked to play with other children at playtime was too exhausting for her socially, and she therefore did not get a break at 'break time'. Papoudi and Kossyvaki (2018) make the important point that "some children with autism prefer to play alone and can find play with other children uncomfortable or even distressing and this should be

respected" (p. 15) for the sake of the child's happiness and wellbeing. By not being able to live their life authentically, an autistic individual's wellbeing may be harmed, according to Späth and Jongsma (2020), and this includes being restricted based on neurotypical assumptions. Poor wellbeing (including low self-esteem and depression) can be the result of submitting to the needs and wants of others – such as autistic individuals being under pressure to conform to neurotypical expectations creating mental health issues – so expectations should be shifted and interventions adapted to reframe what autistic children 'ought' to do (Bottema-Beutel, Park & Kim, 2017). This "moves beyond the deficit-based goal of fixing problems and looks to determine what is necessary for holistic and genuine wellbeing" (MacCormack, 2020, p. 3). According to Späth and Jongsma (2020), core to this wellbeing is the notion of liberty – both positive and negative liberties. Positive liberties are the carrying out of one's own desires and preferences, and negative liberties are the opportunities for non-interference from others. Both types of liberty can play a role in fostering autonomy, with positive liberty allowing the individual to be their own master in a sense, and negative liberties reflecting the external conditions in which they can choose to do so (Späth and Jongsma, 2020). To allow a child to be autonomous in play, the people working with or caring for the child – the 'grown-ups' – should be passing the locus of control to the child for them to be accepted and successful in their own play, in their own way, deciding how and what to play, with authentic self-generation of play (Chen, Lin, Huang & Lee, 2019). According to Leadbitter, Buckle, Ellis and Dekker (2021), autonomy is critical in generating the reality that an individual personally strives for and that includes the freedom and the right to say 'no' – physical prompting, overbearing control, communication attempts being ignored, and blatant removal of the right to refuse, has

left many an autistic individual passive, traumatised, and vulnerable to abuse. Becoming autonomous; mastering one's own actions; being free from interference – these can all contribute to a sense of authenticity in autistic individuals, knowing and acting on their own ideas rather than those of others, but are often denied or restricted by others who are sceptical of the individual's capabilities or future outcomes (Späth and Jongsma, 2020). Specifically,

> Acting authentically involves going about one's daily life and engaging with others in accordance with a 'true' or 'core' self.
>
> (Bottema-Beutel et al., 2017, p. 958)

Neurotypical individuals are free to go about their business and play in their own way, without repercussions or pathologising, even if that type of play is uncharacteristic of the norm, according to MacCormack (2020). Autistic individuals, on the other hand, are subject to assumptions that they have 'widely documented' deficits in play due to difficulties in communication, social interaction and symbolic thinking (Papoudi and Kossyvaki, 2018) and autistic children are said to have qualitative and quantitative disparities in their play *when compared to neurotypical peers* (Kossyvaki & Papoudi, 2016). However, Papoudi and Kossyvaki (2018) highlight that "normative benchmarks are likely to be challenged when it comes to play and autism" (p. 16). Perhaps, then, the emphasis in research (and in education) should be on the conditions that facilitate authentically autistic play rather than on comparisons between the play of autistic children and their neurotypical peers (Theodorou & Nind, 2010).

Autistic play has consistently been viewed from a deficits perspective, according to O'Keeffe and McNally (2025), and many notions of autistic play fail to take the individual child's perspective into account. It has been described as 'atypical' by some and often

becomes subject to scrutiny and attempted remediation where involved parties have tried to 're-orientate' the individual to 'more appropriate' play behaviours – but rejecting this approach, according to Eisele and Howard (2012), can lead to an understanding of the true nature of autistic play. Such a 'deficits' model depicts autistic play as deficient compared to their typically developing, or neurotypical, peers, is often cited as a key impairment, and

> The recurrent evidence of difficulties in the development of play skills has led to this 'deficit' being added as a defining feature of the condition.
>
> (Eisele & Howard, 2012, p. 139)

However, many autistic children may demonstrate quite sophisticated play, showing imagination, language and social understanding – just not in the same way as their neurotypical peers, according to Eisele and Howard (2012).

Increasingly, researchers are campaigning through a neurodiversity paradigm to create an understanding of autistic play that moves beyond the deficits-based neurotypical lens that dominates the literature towards a lived experience perspective that closes the gap between knowledge and practice (O'Keeffe & McNally, 2025). The neurodiversity movement advocates for the rights of autistic individuals, among others, valuing the full spectrum of differences, and promoting rights such as inclusion and autonomy and

> draws from reactions to existing stigma- and mistreatment-inducing medical categories imposed on people that they reclaim by negotiating their meaning into an affirmative construct.
>
> (Kapp, 2020, p. 2)

The movement is led largely by autistic people, but self-determination offers opportunities for many others to identify with and support the movement, and "the specific premise of neurodiversity is full and equal inclusion… Neurodiversity is for

everyone" (DaVanport, 2020, p. 150). A feature of this movement is supporting parents and teacher to use responsive caregiving tactics, speaking the child's own language in a sense, and encouraging them to avoid dangerous 'treatments' and 'therapies' that have the potential to create more harm than good (Kapp, 2020). Kapp notes that the neurodiversity model "sees autistic individuals as possessing a complex combination of cognitive strengths and challenges" (p. 503). Authenticity and individualisation during play activities can be fostered through this model. A number of 'interventions' for autism purport to be play-based, however they can still have a deficits model influence, or stem from behavioural psychology, and contain potentially problematic concepts and language such as 'symptoms', 'treatment' and 'disorder' (words found in Rust and Thanasiu, 2019) and do not support a neurodiversity model of autism. This includes pre-conceived notions that a lack of 'appropriate' play behaviours are detrimental to autistic children, and the idea that

> it has long been recognised that children with [autism] often get 'stuck' at early stages of play… which prevents them from progressing.
>
> (Rust & Thanasiu, 2019, p. 190)

Proponents of these ideas might go as far as to say that these children are 'missing out' or failing to achieve important milestones, but this is based on an understanding of typical, non-autistic development. Proposals of play-based supports for autistic children is laudable, but potentially only if they are based on autistic norms, not neurotypical presumptions and expectations. For example, while Rust and Thanasiu do acknowledge "a more inclusive notion of play" as one that "reframes the solitary behaviour of children with [autism]… as play" (p. 193), it still presumes autistic individuals to be atypically developing on a normative scale, and that they need to be

put on the correct pathway to be successful. Play interventions purportedly focus on positive emotions and engagement of autistic children – however, without exception from what can be seen in the literature (eg Rust & Thanasiu, 2019; Mercer, 2017; Salman, 2016; Weider & Greenspan, 2006) all include references to correcting developmental lags, getting the child back on track, enforcing more appropriate behaviours, and so on.

Consequently, play has come to be known as a core characteristic in defining what autism is, with the so-called difficulties, delays and deficits in play being viewed as far removed from the norms displayed in other children's play (O'Keeffe & McNally, 2020). O'Keeffe and McNally (2020) instead suggest that the play experiences of autistic children are simply *differences* across all aspects of play, however how much they differ in each area can vary, which reflects the heterogeneity of autism. Adaptations should be allowed, and an understanding of play through the individual needs, preferences and presentations (O'Keeffe & McNally, 2020; Eisele & Howard, 2012). Autistic play ought to be embraced by everyone working with or caring for the child, as it is not a disordered version of normal, and there is no need for it to be trained out of them or reorientated in any way (O'Keeffe & McNally, 2025; Mitchell & Laschewicz, 2018; Conn & Drew, 2017). In practice, the scrutiny of autistic play and its attempted reorientation should be outright rejected, according to Eisele and Howard (2012), instead supporting and understanding its true nature should be the default. After all, according to Claparède,

> the function of play is to allow the child to express [themself], to display [their] personality, to pursue momentarily the line of [their] greatest interest in cases where [they] cannot do so through serious activities.
>
> (in Piaget, 1962, p. 158-159)

According to Milton and Bracher (2013), if the conditions (environment, freedom of expression, acceptance, and so on) are conducive then autistic individuals have the opportunity to break even with non-autistic peers, or potentially outmatch them in a number of ways. Conversely, though, dismissing autistic features as peculiar or wrong fails to recognise them as vital strategies for success so it is important to support experiences that are "compatible with their dispositions, without being forced to mimic non-autistic behaviours" which could be potentially damaging (Milton & Bracher, 2013, p. 64). Thus, it follows that play should be allowed to be enjoyed with authenticity, being true to themselves and with that which interests them, not what others expect of them. Free to carry out one's own desires and preferences, free from interference, experiencing liberties both positive and negative, a chance to be both autonomous and authentic (Späth and Jongsma, 2020). To play is to be human, according to Eisele and Howard (2012), and presuming autistic children do not play appropriately is dehumanising. Failing to recognise this is at odds with the UNCRC which protects the children's right to play (Children and Young People's Commissioner, 2021; Eisele & Howard, 2012). Furthermore, because Article 31 is a child's right to rest, leisure, recreation *and* play – rather than simply the right to play – there is no requirement for this to be productive in any way or by anyone's standards whatsoever and the child can choose to do nothing because passive leisure is included within this right (Cartmel, Hurst, Bobongie-Harris, Hadley, Barblett, Harrison, & Irvine, 2024). When planning experiences, it is worthwhile reflecting on the motives of the activity, and whether the outcomes are desirable based only on 'the norm', for example

> a set of behaviours that are valued and rewarded by the neuromajority… *appropriate* eye contact, *appropriate* facial expression, *appropriate* body language.

(Lawson, 2020, p. 521)

Play frameworks and programmes of intervention that do not take this into account, even when they aim to be fun and toys are used, are little more than an adult-led comprehension activity (Gerber, 2017) but it may potentially go further than this to cause actual harm to the child's autonomy and authenticity. Autistic adults, when consulted, often raise concerns of the lack of autonomy, and warn against using an autistic child's 'special interest' (a subject dear to their heart) to cajole behaviour out of them that is deemed more favourable (Gibson, Pritchard & De Lemos, 2021). This often masquerades in certain fields as 'preferred play' because choices are being made by the child to use a particular toy or engage with a particular adult (Leaf, Courtemanche, Taubman, McEachin, Sheldon & Sherman, 2012), but children are manipulated in such a way that they have no option but to behave in a certain way, thus reducing their freedom of thought and choice:

> While the participant played with either… [baseline] toy, the experimenter did not provide any social interaction or verbal communication, did not play with the toy, and did not make eye contact with the participant. If the participant attempted to interact with the experimenter, minimal attention or responding was provided. If the participant selected the control stimulus, the experimenter took the card and provided no interaction with the participant for 10s.
>
> (Leaf et al., 2012, p. 476)

Following this, adults would manipulate play with their stimulus, for example pretending that the stimulus was a train if the participant liked trains, and made this the only option for play by responding in the same way for other choices. The proclaimed goals for these interventions were to avoid limiting educational and social opportunities (thus increasing independence), according to Leaf et at (2012), but it appears that the opposite is true. Instead, according to Doody and Mertz (2013), levels of independence

and autonomy can actually increase by being able to participate authentically in *true* preferred play – identifying and embracing the genuine preferred play of autistic children can have wide-ranging implications with potentially far more positive outcomes.

Despite this notion, research into the play preferences of autistic children from a Behavioural Psychology standpoint as illustrated has instead aimed to manipulate and alter the preferred stimuli (toys, etc) to make the play more palatable to others and to allow practitioners and researchers to further 'reinforce' desired behaviours in general, using this new, altered play 'preference' (Leaf et al., 2012). However, Leaf et al. actually acknowledge that the perceived interest in the stimulus introduced by the researchers may not in fact be a true preference, but instead the autistic children are so used to being manipulated (or 'reinforced') by the adults around them that they simply did as they thought others expected and potentially "a history of reinforcement for imitation and direction following… was a factor in behaviour change" (2012, p. 482). Since 'successful' behavioural modification and 'rehabilitation' programmes often depend on the identification of a preferred stimuli such as toys and activities (Verschuur, Didden, Van Der Meer, Achmadi, Kagohara, Green, Lang & Lancioni, 2011) and preference assessments may fail to identify authentic preferences (Leaf et al., 2012), the evidence for behavioural approaches having any recognition or understanding of authentic autistic play appears lacking. Furthermore, 'preferences' gleaned from the grown-ups, the parents, teachers, and other caregivers, may not necessarily match the true preferences of the autistic child, and preferences may be likely to change over extended periods of time unbeknownst to anyone but the child themselves (Verschuur et al., 2011). Thus, rigid programmes designed to make use of the child's play preferences to

reinforce and manipulate desired behaviours fail to be play-based at all, because they do not take account of these things, and ceases to be recognised as 'play' in a true sense:

> Play is a chance for children… to develop themselves in accordance with their own ideals of what they should be.
>
> (Henricks, 2008, p. 164)

One single definition of play is hard to come by but this idea of play being an activity of 'self' is non-negotiable. Simpson (2024) concurs that defining play is a tricky concept but there should be no doubt about what it means to the child – it must be (among other things) done for its own sake, voluntary, limitless, and child-led with no adult involvement unless the child chooses otherwise. Henricks (2008) elaborates that play can be with another, it can be alone, it can be with objects, with the physical environment, with our own bodies and minds, and even with ideas, norms and language. Individuals can be 'at play', they can be 'playing with' and they can also be 'in play', and all these different variables suggest that researchers and practitioners may potentially pick and choose the aspects they wish to focus on, and may tend to idealise play (Henricks, 2008).

Because the history of autism derives from medical and psychiatric fields, and therefore treats any deviation from normative expectations (or idealisations) as disorder and dysfunction, the majority of research has been on achieving remedial outcomes and early interventions for autistic children (such as ABA) are perceived to be the gold standard, and the rigid success criteria of normalisation are seen as the only acceptable outcomes (Botha, 2020). Many autistic adults express discomfort at the thought of 'play interventions' being rooted in behaviourist approaches and are

concerned that many play-based therapies mask an underlying ABA-like philosophy (Gibson et al., 2021). The educational training of many professionals such as doctors (Nicolaidis, 2012) and speech and language therapists (DeThorne, 2020) has taught them to associate autism with tragic lack of ability. Since the latter half of the 1900s, predominant theories have framed how autistic differences are perceived today, and continue to influence this in spite of accounts to the contrary from autistic individuals themselves (DeThorne, 2020). Such prevailing misunderstandings of autistic behaviour and discriminatory attitudes can contribute to harmful stereotypes and associated stigma instead of trying to understand how autistic and neurotypical individuals can learn from each other and embrace their differences - for example, autistic individuals can find eye contact uncomfortable and distracting, so demanding eye contact is an unreasonable expectation and attention should instead be focused on creating a more comfortable environment for that child to enable them to learn and be successfully included within that environment where they can be themselves without these unreasonable demands (DeThorne, 2020).

Pathologised views, and the consequent demands and expectations, may result in

> attempts to reduce or eliminate natural coping and self-regulation strategies, such as repetitive motor mannerisms or 'stimming' behaviours... [and] eliminating such behaviours can lead to children being unable to avoid aversive experiences, calm themselves or to communicate intense emotions.
>
> (Leadbitter et al., 2021, p. 3)

'Restricted and repetitive behaviours' tend to be considered atypical, requiring reorientation to allow for 'appropriate' behaviours to take their place (Eisele & Howard, 2012). Such views may stem from the autism diagnostic criteria which claim that

restricted and repetitive behaviours cause interference with functioning, and are detrimental to progress (Jacques, Courchesne, Meilleur, Mineau, Ferguson, Cousineau, Labbe, Dawson & Mottron, 2018). Despite the prevailing misconception that repetitive behaviours "reduce autistics' attention to and exploration of their environment" (p. 2), Jacques et al. (2018) highlight that direct evidence of this is sparse, they did not find any negative correlations between these behaviours and object play and exploration, and they disagree that repetitive behaviours in any way reduce, limit or interfere with this type of play and exploration. Rust and Thanasiu (2019), despite notions of 'deficits in play' for autistic children, suggest that restricted and repetitive behaviours can actually be redefined as play activities that provide intrinsic pleasure, escape and relaxation. Eisele and Howard (2012) corroborate this concept by positing that if the attitude of the repetitive activity is playful, then the actions may indeed be classed as play, even if others do not perceive it to be. Autistic people have noted that enjoyment of these repetitive activities is not only engaging and interesting to them, but can even shape their personality, identity, and future endeavours, developing into talents and skills that they are proud of (DePape & Lindsay, 2016). It is rarely conceptualised by others that repetitive activities, including taking a specific interest in certain objects and ideas, can be beneficial to the child, even if the repetitive activity is connected to the learning materials provided – such as a particular interest in environmental print for a hyperlexic child (Mottron, 2017). Interests in general can be especially intense, according to Mottron (2017), which may be related to information processing and information seeking, and this is often quite particular to autism. Again, attempting to extinguish these interests, or pathologise them into obsessions, is unfair to autistic individuals, and rather than the activities themselves being problematic, it appears to be the

interruption or removal of the intense interest activities that causes the outcomes that adults working with or caring for the child may find undesirable (such as meltdowns and dangerous actions) (Mottron, 2017). Ultimately,

> barriers to children playing in ways that provide them with the most happiness and satisfaction has implications… contributing to the construction of negative identities and marginalised roles and to the stress of 'acting normal'.
>
> (Conn, 2015, p. 1203)

Research on the natural ways that autistic children play, particularly in relation to how they play at school as opposed to clinical environments, is limited (Holmes & Willoughby, 2005). How 'good' play is conceptualised in autism fields appears odd, according to Conn (2015), with practice often being focused on adult-directed play, adult-selected resources, goal-orientated activities, and non-voluntary acts on the child's part – this does not tend to happen in other play practice. Furthermore, Holmes and Willoughby (2005) have suggested that often the behaviours that practitioners and researchers might expect to observe (thanks to historical accounts of autistic play), examples of stereotyped behaviour for instance, may not even be present during observations for some autistic children. This may be the consequence of a number of misinterpretations of visible behaviours, after decades of watching autistic children without really understanding them, and in reality the ways that they play are based on how the child views the world:

> In play, children reproduce their ideas of the world as they see it, as a way of interpreting and making sense of lived experiences.
>
> (Conn, 2015, p. 1201)

Their world may appear less social, more individual, with play reproducing their sensory and perceptual experiences, exploring and enjoying how things interact, look, feel, smell, taste, sound and move, including the environment, objects, toys and also play

partners (Conn, 2015). It is vital to seek the inner experiences of play for autistic children, according to Conn (2015), and know the particular ways that they enjoy themselves, but interpreting children's perspectives can be challenging, so autistic adults can instead offer a narrative with strands of similarity that hint towards a shared view of the world, or a potential shared culture of play.

Autistic play, as described in narratives by autistic individuals, might often centre around orderly play using objects and words, construction play, physical play, straightforward turn taking with another (that is preferably *clear* and *predictable*), visual, sensory and perceptual play, one-partner control play, and play with reduced verbal participation (Conn & Drew, 2017). The consistencies across narratives from autistic biographers suggest at the very least a shared phenomenon of perception and sense making, if not a uniquely autistic play culture (Conn, 2015). It may be that autistic play can be affectionately described as 'quirky' by family and friends, and some autistic adults may embrace 'quirky' to describe their own play, but this description should also reinforce that the differences in play can reaffirm individualisation and personal dignity, and support the construction of autistic identities (Mitchell & Laschewicz, 2018). Autistic biographers have, according to Conn and Drew (2017), noted that these qualitative differences in play, with their preferred play and special interests being unapologetically quirky, "perceived by others as being outside a perceived norm" (p. 855), are indeed indicative of a potential autistic play culture.

The dominant discourses that play down the value of the unique interests and experiences, and the individuality with which autistic people engage, essentially

devalue the person in the process of discussing them in this way (Conn & Drew, 2017). This can lead to children being reluctant to share their passions and special interests for fear of being rejected or perceived as socially unacceptable – and if parents and teachers (the grown-ups in the child's life) make attempts to mould or correct play preferences, they are simply reinforcing this fear, thus eradicating the fun and enjoyment of play (Mitchell & Laschewicz, 2018). On the other hand, if the grown-ups playing with or observing the child, instead positively interpret their 'quirky' play, without feeling the need to adapt or mould it in any way, the child can feel accepted in their natural state, and Mitchell and Laschewicz (2018) invite the grown-ups to re-evaluate what they define as fun or functional, resisting the societal norms around what is 'appropriate' play, and embrace the child's 'quirky' interests and play preferences. Only then can we have hope of changing the ways that families, practitioners and policy-makers approach autistic play, and embrace the hidden gems within.

2.5 Historical insights into autistic play

Before these dominant discourses built on behaviourist and medical views took hold, there were other views that, whilst perhaps not dominant, prevailed nonetheless. Beginning around the middle of the twentieth century in Post-War France, there existed clusters of anti-establishment schools and compounds for autistic children, that aspired to de-institutionalise their care and education (Briggs, 2019). Maud Mannoni, for example, despite often being 'misinterpreted' as blaming mothers for childhood pathologies, sought to focus on shifting attitudes away from authoritarian institutional approaches of treatment and towards relationships-based care (Wustefeld & Johnson,

2019). She developed ideas on 'play' that challenged assumptions about what is normal for children, whilst working at a hospital in Antwerp during the Second World War, and began embracing some early notions of a social model of disability, speaking out against assumptions that *les enfants inadaptes* were lesser humans (Briggs, 2019). Mannoni came to think of play "as a creative space that allowed children to access and express imagination" being "inclusive of disabled children… [who] did not need to exhibit specific types of play" (Briggs, 2019, p. 57). By 1969, she had created a school based on her post-war ideas, an environment in which autistic children could be cared for and educated within and outwith the walls of the school, to explore their own interests and pursue desires (Wustefeld & Johnson, 2019). The Bonneuil-sur-Marne school mainly catered for children with limited verbal communication, who did not show typical levels of social and imaginary play, and it did not subscribe to a specific, rigid pedagogy, noting the particular distress that conformity to normative standards caused for autistic children (Briggs, 2019). Mannoni did not attempt to change the behaviours of the children at the Bonneuil, but

> She instead articulated an alternative form of play that was more inclusive of nonobservable behaviours and forms of individual creativity as genuine examples of play.
>
> (Briggs, 2019, p. 58)

Efforts of pioneers like Mannoni expanded the boundaries of childhood, becoming more inclusive and transformative, opposing the rigid institutionalisation of autistic children at a time when others sought to dehumanise, overpower, and experiment on them (Briggs, 2019).

Fernand Deligny was similarly pioneering, having previously worked as a specialist teacher with 'delinquents', and subsequently experimenting after the war with the 'Grande Corde' which aimed to keep the 'delinquents' out of institutions (Gunn, 2021), Deligny began setting up a 'centre' of sorts, much like Bonneuil, which acted as a specialised residential commune in France (Wustefeld & Johnson, 2019). After receiving an influx of pupils from Maud Mannoni and like-minded colleagues such as Francoise Dolto and Emile Monnerot in the late 1960s, Deligny's attempt to de-institutionalise the care of autistic pupils in the Cèvennes aimed to alleviate expectations placed upon them to conform to norms, and remove any inclination to 'compensate' for their so-called deficiencies (Krtolica & Sibertin-Blanc, 2009). The 'interventionist' approach that had begun emerging, that sought to normalise autistic children was completely rejected within the campus, and emphasised instead was the importance of freedom and exploration to "play beyond the confines of typical educational and social practice" (Briggs, 2019:58). The children, otherwise presumed to require institutionalisation and viewed as uncontrollable, were primarily non-speaking, and in medical model terms they would likely be considered 'profoundly autistic' (Gunn, 2021). Deligny, however, rejected categorisations of the children, of himself, or the other adults at the compound – all involved had defected from social function, as opposed to being seen as social defects, as Gunn (2021) puts it. There existed a 'common', areas in which the adults and children inhabited, sometimes together, sometimes separate, and the children would often wander – it was this wandering that captured Deligny's interest, and though their freedom allowed them to journey wherever they pleased without interference, there existed the *chevêtres*, the cross-beams, which were

> a point in space where the adults' journeys and the children's wander lines cross each other (are entangled); a specific spot… where their acts coincide.
>
> (Gunn, 2021, p. 4)

These specific points may be key for teachers learning to occupy space with, and engage with, an autistic child, while giving them their own freedom to 'wander' during play. Briggs (2019) called this 'reinventing play', and Deligny's tentative attempts allowed free, unfettered play, without disturbing the children or their expressions, which clearly "differed dramatically from how play was envisioned within the traditional notions of education and the discourses of childhood" (p. 47).

During this attempt at Cevènnes, the children were simply inserted into the everyday goings on in the compound, where the adults lived their lives and engaged in horticulture, agriculture, cooking, baking and general farming, and the children were simply present (Brighenti, 2018). There were no courses of instruction, no training, no pedagogies or education programmes – just freedom, despite Deligny's background in specialist education and psychiatric care. Brigheti (2018) notes instead that Deligny's only action came in the tracing of the children's wander lines – their supposedly meaningless, often repetitive gestures that psychiatrists might call 'stereotypies'. This began to 'manifest itself' topographically, with Deligny and his colleagues making maps of the wander lines, paying close attention to potential overlaps, repeated gestures, and points of preference such as water (Gunn, 2021). According to Briggs (2019), this mapping of movements demonstrated to Deligny that these children did indeed play, they were deliberate in their actions, it just simply did not look like what had come to be known as normal play, and he felt it was the "limited inventory of play, which focuses on

the social needs of society" (p. 59) that was the problem, not the play itself. Deligny accepted this play, allowed them to go about their business, content in their actions (Brighenti, 2018). Deligny embraced the "just-thisness of autistic children's lives" (Brighenti, 2018, p. 46), a beautiful summation of how he and his colleagues observed the children at play, without interference or direction, adapting their own behaviours to allow new forms of social expression, and gave them back their humanity (Briggs, 2019).

Deligny (2015) ponders a manifest happiness in the children, one with which other people's happiness seems to pale in comparison, and rather than think of their repetitive actions as reflexes or muscle memory he sees instead their jubilation, purposeful but without the need for ulterior objectives. Comparing this happiness to what the medical model view of autism is, and what many teachers' views of autism are, Deligny may have unlocked the answer to how autistic children and young people could or should be allowed to be. According to Wiame (2016), Deligny held the view that autistic children often thrive far more than others on experiences, interactions, and connections with nonhuman elements of life: that which makes life more 'vivid' to them; the sensory inputs and material items; the natural and non-natural substances that attract their attention and fascination. The social elements of life may be of interest to them, but cannot necessarily compete:

> Autistic children, Deligny argues, watch us living as if we are the characters of a never-ending TV soap opera, but their eyes are never more vivid than [for example] when the look at water and reflections in the water.
>
> (Wiame, 2016, p. 8)

Wiame states that Deligny's use of the wander lines was to track the symbiosis of human and nonhuman elements of the common – their purpose was not to *explain* the

tracks, or to place purpose in (or seeing symptoms and pathologising) their acts, but to just acknowledge, and see them in their trueness. Or, as Brighenti (2018) called it, their 'just-thisness'. Wander lines are not place-bound, nor placeless, but they are place-making, much like wayfaring, with endless potential (Wiame, 2016). To the onlooker, the use of voice, gaze, gesture and movement of the autistic children at Cevènnes may be perceived as odd or meaningless, but

> they do mean something, and they do express something. However, what is signified cannot be grasped by existing ideologies, ways of behaving, or traditional discourses.
>
> (Masschelein & Verstraete, 2011, p 1198)

Sinclair (1993, in Milton, 2016) notes that there needs to be a dignity in how neurotypical people approach autistic behaviours, by meeting them half way, on their own terms, and building bridges between their equally alien ways. Both Sinclair and Milton emphasise that autistic individuals' ways of being are not simply an unfathomable version of normal. Milton (2016) illustrates that Deligny and his colleagues rejected this idea and were instead looking for ways that they could turn away from dominant discourses, exist beyond them, and forget the idea that autistic behaviours are somehow scrambled messages that need decoding. Deligny's philosophy on the matter, according to Milton (2016), could not be in any stronger contrast to the concept held by many that professionals and researchers must figure out what an autistic individual's behaviour must mean, what the function is, or what it is trying to communicate. Instead of the 'just-thisness' of Deligny's approach, the alternative is "an over-abundance of comprehension, which is often what happens to these children" (Deligny, 2015, p. 156), but Milton (2016) illustrates that any level of attempt at 'comprehension' of autistic behaviours without first questioning previous assumptions

and defined terms, is futile. Deligny's philosophical notions have the potential to inspire change in the way autistic activity is viewed, and in finding such similarities within his writing and that of autistic authors, Milton (2016) believes this can develop and grow into a sound, believable foundation for thinking about autism. Using Deligny's philosophy can help develop a programme for teachers working with autistic pupils, to manage realistic expectations and promote the acceptance and 'just-thisness' of autistic play. The final two sections of the literature landscape can demonstrate how inclusive education for autistic pupils and professional learning for teachers can benefit from this outlook.

2.6 Inclusive education for autistic pupils

Much of the research into appropriate inclusive environments for children with ASN have often conflated autism with other disabilities such as Down syndrome, and the distinct needs of autistic pupils are often not met within schools (Reed, Osborne & Waddington, 2012). Ironically, it seems, inclusive practices for autistic people often support others without that diagnosis (Martin & Milton, 2017) even if the same cannot be achieved vice versa. According to McLaren (2013), successful inclusion of autistic pupils "firstly depends on the child being able to comfortably be in, and learn in, an environment" (p. 32), and to do that, classroom norms may have to be turned on their heads. At a conference in 2019, Plumridge's examination of autism and the school environment called into question the fact that the needs of those with physical disabilities have largely been met in Scottish schools, autistic pupils are often overlooked. If the physical environment is not yet right autistic pupils, and such 'inhumane treatment' causing distress to the child is seen as acceptable, then the

school by default cannot be considered inclusive (McLaren, 2013). Built environments, according to Mitchell and Laschewicz (2018) are more than just static structures, but the space that people intersect, act, move and locate themselves in, with learning and play spaces most often being based on the privileges experienced by able-bodied and neurotypical individuals. The dominance of non-autistic, non-disabled people, therefore, deterrence policy and planning and physical spaces, as well as the interplay and relationships within, are "predicated on hegemonic ideals" (p. 1122) and not automatically inclusive. Milton, Martin and Melham (2016) suggest that to be universally inclusive, there needs to be "autistic input in design… of buildings, products, systems, curriculum, policy, and the world and everything in it" (p. 85). McLaren (2013) strongly opposes the expectation and assumption that all children will automatically benefit from being integrated in the same building with their peers. Importantly, when the Salamanca Statement was created, it called for governments internationally to

> adopt the principal of inclusive education and, in so doing, commit to the development of policies and practices that would *enable* ordinary schools to include all children
>
> (Robinson, 2025, p. 14)

It did not deny the need for segregated specialist provisions or call for a reduction in special schools, according to Robinson (2025). These expectations of automatic benefits from being in mainstream education are far from the experiences of many families of autistic pupils and McLaren (2013) points out that successful inclusion is often measured on the ability to 'manage' behaviours such as non-compliance, defiance, absenteeism and aggression. Often applied to meltdowns, shutdowns and panic attacks that can happen when autistic children are overloaded and highly

aroused, the term 'challenging behaviour' is extremely unhelpful for supporting them in school, according to Martin and Milton (2017), but often accompanies a lack of respect for (and understanding of) autistic ways of being. Reed, Osborne and Waddington (2012) cite inadequate teacher education and unrealistic teacher expectations as causes of this (mis)conception but note marked differences between mainstream and autism specialist provisions, where teachers are more likely to have had further professional learning. Even so, within autism specialist provisions the professional learning received may not have the desired consequences when it fails to understand authentic autistic ways of being, and "What hope is there, then, for the mainstream schools who don't claim to be autism specialists?" (Guthrie Stirling, 2025b, p. 313). Whilst many schools in Scotland may claim to be (or believe they are) inclusive, it appears more likely that they are perpetuating a culture of false inclusion, according to Paechter (2019). This does not necessarily mean that schools wilfully default to non-inclusive practices, but individual practitioners' wilfulness can vary within settings particularly with regards to autistic play:

> I have met more than a few teachers, support workers and early years practitioners, whether in mainstream or additional support needs (ASN) settings, who truly value authenticity, autonomy and individual children's interpretations of fun in play, including for autistic children. I have met several who do not quite know how to embrace that yet, but are keen to learn and reflect on their practice. Sadly, however, the overwhelming majority of people I have met who work with autistic children are unwaveringly certain that autistic play is deviant, ineffective and cannot possibly be acceptable.
>
> (Guthrie Stirling, 2025b, p. 313)

Professional learning for teachers, from the point of initial teacher education (ITE) onwards, "must take on the challenge of exposing and deconstructing these discourses" (Robinson, 2025, p. 208). Even if teachers do recognise the value of

inclusion, evidence of successful outcomes from the use of purportedly inclusive strategies appears mixed at best, and even with some inclusion training, adequate autism-specific knowledge may be limited (Ballantyne, Wilson, Toye & Gilliespie-Smith, 2022). Education staff may lack the skills and understanding to prevent the ill-treatment of autistic individuals, and too often, reactionary procedures and interventions in schools tend to be broadly generalised from generic behaviour-based courses that fail to take any individual needs into account (McLaren, 2013). There is a gap in understanding and practice between Scottish schools and the families of autistic pupils, with a mismatch in the reported experiences and opinions of the two and Paechter (2019) suggests that there is a significant lack of understanding of the environment and ethos required for autistic pupils to be genuinely included in schools. Overt discrimination against autistic pupils is seemingly rife in Scottish schools, adversely affecting their educational experience, and proving difficult for families to fight back against, as one parent recalls:

> It felt as though discrimination of hidden disabilities was the one remaining elimination that middle-class liberals were still comfortable with - some in the community just didn't realise how appallingly they were acting.
>
> (Paechter, 2019, p. 49)

Many schools are content that having an autistic child present within the four walls of the school is sufficient enough to consider themselves inclusive, but failing to individualise the experience means that this inclusion is an illusion, according to Paechter (2019). Whilst one headteacher in Paechter's account did acknowledge the school's inadequate knowledge and inappropriate responses to an autistic child's distress, such acknowledgements are few and far between. Similarly, there is often little acknowledgement of the different types of autism training teachers have available

to them (for instance: duration of course; level of course; whether it is part of a verified or recognised qualification, and so on) and how this may potentially impact the quality and depth of knowledge gained from autism training or how this may impact practice (Ballantyne et al., 2022). Paechter (2019) notes that different types of training can result in varying responses to and actions towards autistic pupils, and not every training course will result in positive outcomes for the child in question. Furthermore, experienced teachers may not automatically be more able to deliver successful inclusion, as years of service do not necessarily equate to more successful inclusion even if they have worked with an autistic pupil in the past (Ballantyne et al., 2022) and they may even be able to learn from their younger counterparts following their newer, more inclusive (since the development of the Framework for Inclusion) initial teacher education and post-qualification learning inputs (Florian, 2021). For education across the board to become inclusive, both ITE and continuous professional learning would have to become prepared to combat discriminatory attitudes and create a culture of welcoming diversity (Robinson, 2025). To meet the needs of children with ASN in mainstream schools, as well as specialist provisions, "inclusive schools would need a supportive policy environment, local government commitment and effective, internal leadership" (Robinson, 2025, p. 15).

Teachers play such a vital role in the successful inclusion of autistic pupils, but they need to feel confident in providing appropriate strategies (Russell, Scriney and Smyth, 2022). Often, strategies employed by teachers in mainstream schools are *disadvantageous*, rather than supporting the autistic child's needs, thus negatively impacting the child's chances of successful inclusion (McKinlay, Wilson, Hendry &

Ballantyne, 2022). For example, whilst autistic pupils do appreciate supportive environmental and curricular adjustments in class,

> they do not want accommodations and supports to negatively accentuate their differences… or put an unnecessary spotlight on [them] and their need for support.
>
> (Lebenhagen, 2022, p. 12)

Scottish guidance on Getting it Right for Every Child should be enhancing the inclusivity for autistic children, but without *appropriate* strategies and actions, support is ineffective at best and detrimental to the pupils at worst, according to McKinley et al. (2022). Wood (2021) highlights that some school staff may stubbornly persist with activities and goals with little to no educational value, in spite of poor progress, and instead of recognising the need to adapt this for pupils, they put the failure down to the child's autistic difficulties. Every autistic pupil has their own individual challenges and preferences, and what works for one child may not work for another, but teachers require a deep enough understanding of autism to begin with in order to tailor their classroom practice appropriately, which often is not the case (Russell et al., 2022). Various studies have looked into different methods of 'preparing' teachers to teach autistic pupils and the most frequently implemented training, according to Hersh and Elley (2019), is one-off full- or half-day workshops with self-initiated learning through experience coming second. However,

> mainstream teachers report inadequate preparation and lack of [autism]-specific training… as a reason for their poor attitudes towards inclusion of these students.
>
> (Russell et al., 2022, p. 3)

Leonard and Smyth (2022) recently reported that teachers who receive generic ASN or inclusion training as opposed to autism-specific professional learning were no more positive about the inclusion of autistic pupils than those who had received none, and

over half of primary schools had negative attitudes about including them in their classroom. Teachers and other staff may have negative ideas based on flawed perceptions of the personality, intent, and reasoning of an autistic pupil, such as being selfish, extreme, stubborn and other similar (negative) descriptions that could be considered in different ways if they knew enough about autism to frame it more positively within a strengths-based viewpoint (Wood, 2021).

Teachers are increasingly required to take on the responsibility of developing inclusive schools that allow all pupils to feel a sense of belonging and achievement, according to Done and Murphy (2018), even in the face of structures and systems in place that prioritise attainment measures and standardisation. Policies and legislation that reduced the number of segregated special schools and moved pupils into mainstream environments, in the name of 'inclusion', also shifted responsibility onto mainstream teachers. A lack of preparation for this responsibility creates a potential catch-22 situation where teachers become both the problem and the solution, and self-improvement becomes the only viable option for teachers to enact change of any kind (Done and Murphy, 2018). Many teachers may feel insufficiently prepared to get it right for autistic pupils in their class, and a lack of knowledge and understanding around autism can lead to the negative attitudes surrounding them (Rajotte, Grandisson, Couture, Desmarais, Chrétien-Vincent, Godin & Thomas, 2025). In an example of particularly damaging everyday attitudes that are verbalised by school staff, Hodge, Douglas, Kruth, Connolly, Martin, Gowler and Smith (2022) illustrate how these 'words that wound' can stay with an individual for the rest of their lives:

> 'Careful she's a biter'; 'He's one of our special needs'; 'He's just an attention seeker. Ignore him' – These are some of the ways in which we have heard autistic and other disabled children conceptualised… the everyday teacher talk that is used by educators in the presence of children without any apparent awareness of how such comments can have lifelong effects on the young people who hear and absorb them.
>
> (Hodge et al., 2022, p. 244)

Watson (2025) highlights that there are a number of 'incredible' educators working with children who have additional needs, but there are also increasing numbers of neurodivergent children accessing a mainstream education. Teachers can learn from "constantly questioning, thinking critically about our work and challenging ourselves" (Watson, 2025, p. 2). Some teachers are aware of the 'words that wound' and they may attempt to challenge the harmful practices of colleagues and share their concerns, according to Hodge et al (2022), and some of those colleagues may choose to reflect and repair the damage. Others, however, might feel justified in their actions and assert that these words are factual, but also potentially feel that it is unnecessary to shield the pupils from these views as they either cannot understand the words spoken or incapable of paying attention to them. Hodge et al (2022) assert instead that the attitudes, views, mindsets and words expressed by adults about us as children shape the people we grow to become, especially those of adults in positions of authority and influence. Even throwaway comments, so-called jokes, careless criticisms and thoughtless opinions that are not intended to harm, can stay with that person until adulthood, and autistic people are no exception to this (Hodge et al, 2022). Often, teachers may be unaware of the impact they have on autistic pupils, when they may have opted (or felt they had to)

> make their behaviours or hide their special interests to appear more neurotypical… [which] over time may result in autistic fatigue and burnout.

(Lowri, 2021, p. 13)

Starting from a point of open-mindedness should be a baseline for any educator, according to Watson (2025), recognising that all children have something to contribute in their own way and accepting that we should not be measuring autistic pupils by neurotypical standards. It can be discomforting for teachers to realise the impact of their words and actions but by recognising and reflecting on the damaging effects they can have, we can reject the 'insidiously ableist culture' that informs these views and "communicate recognition of, and value for, who they are and how they engage with the world" (Hodge et al., 2022, p. 252). Without laying the blame solely on individual practitioners who engage in negative talk about autistic pupils, we can seek to expose the systems and structures that encourage and enable the propagation of these damaging views. The harmful teacher talk is indicative of how society views autism at large, according to Hodge et al (2022) and demonstrates that these views and words appear to be shared widely, with ableism and normative expectations positioning autistic people as being 'other' and 'lesser'. Discourses of inclusion as merely participation in normalised school activities such as standardised testing, league tables and other performative measures of educational competition, tend to maintain, generate or exacerbate the barriers that are faced by pupils with ASN (Done and Murphy, 2018). An inclusive education should allow autistic pupils to maximise their daily participation in meaningful activities such as learning and play – in a 'neuro-inclusive' way that

> makes sense to them… allows them to feel comfortable, confident, satisfied and respected… [or] perform their occupations differently from what is expected
>
> (Rajotte et al., 2025, p. 283)

This can be done through teachers engaging in additional professional learning, according to Done and Murphy (2018), but this runs the risk of them becoming personally accountable for perceived failures in inclusion if it does not produce the desired results. Intending to be more confident in supporting autistic pupils, teachers may resort to accessing training in the popularised autism practices focusing on developing skills rather than reducing barriers, which end up being exclusionary rather than "genuinely embracing the philosophy of inclusive education… adapted to the needs of autistic students" (Rajotte et al., 2025, p. 282). Professional learning activities must be effective and appropriate to their contexts but teachers are often limited by what is on offer, whether restricted by budgetary constraints or the adequacy of the courses provided (Done and Murphy, 2018). 'Responsibilising' teachers to effect change, with no support to do so, ends up becoming a 'cruel optimism' that cannot be rectified through effort alone. Done and Murphy (2018) advocate that school and local authority leaders should also be held accountable for identifying and providing realistic and manageable professional learning needs. Understanding ableism is crucial for anyone working with autistic individuals, yet it is perpetuated by the norms and values shared in society, from subtle insensitive language that perpetuates marginalisation of autistic people, to the full-on denial of that individual's personhood and right to be (Bottema-Beutel, Kapp, Lester, Sasson & Hand, 2021). Furthermore, "inclusion can never be fully achieved if ableism continues to form the foundations of [so-called] inclusive approaches" (Manalili, 2021, p. 22). Many common educational practices are founded on or incorporate ableist assumptions, according to Manalili (2021), which may inherently presume that the child is the source of the problem, and this includes many models of (so-called) inclusion. In order to actually be inclusive, however, those

working with autistic individuals must adopt an anti-ableist stance and question or outright reject deficit discourses, inaccurate representations, and internalised negative beliefs, choosing language carefully and committing to less discriminating and more accurate ideas around autism (Bottema-Beutel et al., 2021). Inclusive leadership and 'neuro-inclusive' professional learning must be the way forward, according to Rajotte et al. (2025).

The reductionist and disabling attacks on autistic peoples' ways of being are an everyday reality. Hodge et al. (2022) note that these attacks are often referred to as 'microaggressions' within Critical Disability Studies, and these microaggressions should be recognised by everyone working with autistic people at all levels from frontline educators to managers and policymakers. Crucially Hodge et al. (2022) note that there are often calls for researchers to 'balance out' the increasing reports of negative experiences within the autistic community with positive examples of good practice. This appears to be suggested purely for the benefit of the practitioners who are confronted with the reality of their microaggressions, rather than based on accurate weighting of negative reports against positive reports, and Hodge et al. (2022) note how important it is to represent these lived experiences and the damaging effect they can have in raw terms in spite of any noble intentions of teachers. Like many other critical autism researchers, I too have been a teacher prior to researching these attitudes and

> It is not our intention or desire to disparage the practice of education or to demean and vilify the actions of well-intended educators. Rather we have always seen reflective practice as a critical contributor to our own development as practitioners.
>
> (Hodge et al., 2022, p. 247)

Regardless of individual attitudes, legislation mandates that teachers adapt their practice appropriately to accommodate all children, including autistic children, and ultimately successful inclusion relies on the teachers (van Steen & Wilson, 2020), who are at the 'forefront' of inclusive education, and positively or negatively impact the child's whole educational experience. When school staff understand autism better, according to Lowri (2021), the chances of negative school experiences may be less likely, with higher likelihood of successful inclusion. Reflective, supportive, and responsive teachers are key elements of a successful inclusive education for autistic pupils, according to Lebenhagen (2022), and a lack of knowledge and understanding is a significant barrier to this, particularly if the teacher and wider school culture subscribes to ableist viewpoints. Manalili (2021) emphasises that current 'inclusive education' policies, practices and (so-called) 'knowledge' of autism based on ableist ideologies, are so deep-rooted and pervasive it will continue to hinder true inclusion until teachers begin to respect autistic autonomy and embrace authentic ways of being. Professional learning is one potential opportunity to trouble this. Effective teacher education and professional learning programmes that deconstruct and expose the dominant discourses that currently disrupt professional learning and development are needed (Robinson, 2025).

2.7 Professional learning for teachers

In Scotland, as with many other countries, professional learning is necessary for all teachers to 'perform' their professional standards and maintain their professional registration (Lloyd & Davis, 2018). One major criticism of this is that it potentially removes ownership, autonomy and relevance from individual teachers, and reduces its

value and the motivation to participate, according to Lloyd and Davis (2018). Continuous Professional Development (CPD), which is broadly conceptualised as any type of professional learning ranging from one-off short courses to sustained engagement in learning and even simple collegiate discussion, can vary significantly in quality, practicality and impact (Makopoulou, Neville, Ntoumanis & Thomas, 2021). Workshops and short courses feature heavily in many teachers professional learning portfolios, and whilst their one-off nature creates questions of efficacy, Makopoulou et al. (2021) highlight that the impact of a course depends largely on the factors such as meaningful engagement, peer learning, scrutiny of existing practices and bridging old knowledge and new knowledge together. However, contextual factors such as school ethos, support from leaders, and physical or financial resources will also have an influence on the outcome of the professional learning (Makopoulou et al., 2021). The lack of follow-up, the lack of perceived relevance and value, and poor support for implementation are potential reasons why these professional learning opportunities fall short, according to Keay, Carse and Jess (2019). Furthermore,

> 'quick fix' professional development programmes have traditionally been unsuccessfully used to eradicate the perceived failings of... primary schools.
>
> (Keay, Carse & Jess, 2019, p 126)

Teachers are being put through training that prepares them as if they are mere technicians of state education and lulls them into the false belief that inclusive practice can happen "unproblematically, in a politically neutral environment" and there is no need to question the status quo or look too deeply into "taken-for-granted assumptions" (Robinson, 2025, p 46). With regards to such failings, recollecting that Paechter (2019) highlighted an 'illusion of inclusivity' for autistic children in Scottish

schools, and recognised the need for schools, headteachers and teachers to "consider the inadequacy of their knowledge" (p. 50), it is clearly important to turn to the vital skills and understanding required for teachers to support these learners better through their own professional learning and development. Whilst general 'inclusion' courses are relatively common, autism-specific training of any kind is far less reported with only a quarter of teachers having accessed any professional learning in this area (Ring, O'Sullivan, O'Keefe, Ferris & Wall, 2019). Individual teachers may have inclusive *morals* and *values* and believe that they can enact these, but their professional learning experiences (or lack thereof) may have caused a juxtaposition in practice that they feel they cannot challenge (King, 2019) and while teachers in Scotland may believe that they are inclusive towards autistic children, the experience in reality appears to be far from it (Paechter, 2019).

In Scotland, professional learning opportunities come in many guises, according to McArdle and Coutts (2010), including the year-long post-qualifying induction scheme, masters-level study and specialist qualifications, as well as a vast range of CPD courses and workshops. Makopoulou et al. (2021) suggest that research into the efficacy of CPD short courses has been somewhat of a mixed bag, with many critics arguing that their impact is limited and fails to engage teachers in any meaningful way, as they many be generalised, standardised, and absent of any consideration for individual contexts. Professional learning might often feel like something that is done *to* teachers, according to King (2019), and may not necessarily align with their own beliefs and understanding, particularly if the professional learning is rolled out at a systemic (school, local authority, national) level. Makopoulou et al. (2021) do contend that not all professional

learning opportunities that are short in duration are limited in impact, and even one-day courses have the potential to "have a considerable and lasting impact on teaching and learning" (p. 781). Professional learning in general, however, is more likely to be effective when teachers are able to "scrutinise existing practices and make connections between new and existing understandings" (Makopoulou et al., 2021, p. 784). Promoting teacher learning through professional enquiry and practice-based research is promoted within the GTCS standards but there are tensions between what is expected of teachers as researchers as opposed to what is expected of them in practice and these systemic and policy-led expectations are often seen as impracticable rhetoric (Brack, Kennedy & McLeod, 2026).

Change is most likely to occur when systems such as schools and local authorities use a model of professional learning that includes enactment and reflection, rather than traditional models of training which have a significant theory/practice divide (Adams & Mann, 2021). One such heavily-used traditional model is through short course delivery that relies on the rapid-fire relaying of suggested skills or knowledge but lacks real-life strategies for teachers to apply to their own contexts (de Paor & Murphy, 2018). Teachers themselves have commented, according to de Paor and Murphy (2018), that professional learning was most useful when it applied directly to the needs of their own pupils, with practical approaches that could be easily adapted to their own classroom situation, and imminently relevant to their practice. Passively receiving information from another professional is unlikely to result in lasting impact, but where knowledge is gained, subsequently implemented in classroom practice and its impact scrutinised through evaluations within the teachers' own context, it is more likely to lead to ongoing

success through an understanding of the process that lead to the change being effected (Porrit, Spence-Thomas & Taylor, 2017). Robinson (2025) notes that evidence-based reflection for teachers can "quieten the disembodied… voice that was ever present… giving them confidence in themselves and their capacity to practice inclusively" (p. 208).

According to French et al. (2023), through pulling together multiple different forms of professional learning – such as questioning attitudes, accessing new self-directed knowledge and theory, critically evaluating one's own practice and all-round "digging beneath the surface… as a means to interrogate and reflect" (p. 701) – educators can generate high-quality professional learning that becomes "a generative and productive state in itself" (p. 695) as opposed to a stagnant and passive professional development experience. This troubles existing expectations of professional learning and transforms linear, sequential and hierarchical processes of teacher learning to a liminal, exploratory space, with new possibilities and creative solutions to educational problems (French et al., 2023). This presents us with opportunities for using professional learning for teachers to respond to 'knotty issues' in education, by troubling the status quo and dominant discourses (French et al., 2023). Hierarchies need not be reinforced but can be flattened to become a more critically reflective space allowing marginalised voices and views to be heard, challenging dominant discourses and creating pause for thought. Where professional learning can often be used as a 'sedative' to shut down debate and individual thought it can also be used to interrogate teachers' knowledge and 'truths' learned through their own experiences of education and critically reflect on these to

> germinate the seeds of personal and professional generative change but needs to be created and maintained in defiance of current education… climate and policy.
>
> (French et al., 2023, p 5)

A cultural shift is needed, according to Brack, Kennedy and McLeod (2026), where teachers are trusted to have agency over their own professional learning and development, with collaboration and peer support being encouraged instead of a competitive and insular perspective within schools. These competitive cultures often perpetuate dominant discourses and create a resistance to change, where collaboration is limited by some teachers' reluctance to challenge accepted norms. Brack, Kennedy and McLeod (2026) emphasise that challenging accepted norms works best when it is a shared, collective, cultural resistance to the dominant discourses. Most teachers will simply comply with conventional expectations despite their better judgment, but confidence to challenge these discourses on a personal and shared level is possible when collective narratives are opened up – and this can happen "when individuals reflect on their own self-understanding in comparison to others" (Brack, Kennedy & McLeod, 2026, p. 54).

Rather than being dependent on others to feel confident in enacting change, an alternative autonomous approach to professional learning enables teachers to ask critical questions of their own practice and has the capacity to create or build upon transformative practice and teacher autonomy, because "good teaching can be coached and learned (but not taught) through reflective supervision" according to de Paor and Murphy (2018, p 70). This capacity must include an awareness of their own professionalism and "a deep understanding of the context of their practice"

(Donaldson, 2011, in Adams & Mann, 2021, p 595). Developing this awareness and understanding starts early for teachers in Scotland, with ITE at university and continuing throughout their careers through the various General Teaching Council for Scotland (GTCS) standards, and concepts such as 'critical reflection' are common in these professional expectations, but what this means in practice may not be clear and may result in teachers trying to prove positive impact through imposed evaluations, rather than genuinely reflecting on processes and learning (Adams & Mann, 2021). Annual professional reviews of development (PRD) and the 5-yearly Professional Update (PU) are GTCS-imposed evaluations that are intended to build reflection and improvements to practice, according to Adams and Mann (2021), and these mandated review processes require teachers to account for ongoing professional learning and development activities in order to maintain their registration. Brack, Kennedy and McLeod (2026) indicate, however, that whilst many teachers are engaging in "valuable, informal, self-directed learning", it would appear that "the current PRD/PU structure often fails to recognise or validate this work" (p. 3). This needs to be improved in order to fully maximise the relevance of – and allow a genuinely reflective evaluation of - teachers' professional learning and development (Brack, Kennedy & McLeod, 2026).

Good professional learning (and the subsequent evaluations of these experiences) enables teachers "to have challenging and courageous conversations about teaching and learning" and helps them to "articulate… values and beliefs around the purpose of education" (King, 2019, p. 169). In order to have the 'challenging and courageous conversations', teachers are likely to have to engage in critical reflection, and in fact the GTCS standards require it, by:

> - Critically examining personal and professional attitudes and beliefs and challenging assumptions and practices.
> - Critically examining the connections between personal and professional attitudes and beliefs, values and practices to effect improvement and, when appropriate, bring about transformative change in practice.
>
> (GTCS, 2021, p. 6)

There is more emphasis, in these revised standards than ever before, on engaging critically with policies and research as well as engaging in practitioner enquiry (Kennedy, 2022). Action is also needed in terms of reflection, according to the GTCS (2021), linking reflective enquiry to practice and actively engaging in professional dialogue around this. However, particularly in a post-pandemic world, Kennedy (2022) notes that teachers in Scotland may be finding that even if the standards broadly shape their professional learning and professional development through mandated policy, their impact on teachers' personal choices for activities to engage in is limited and they may simply be using the standards retroactively to account for their choices. One participant in a recent review stated that teachers are

> basically looking at the standards and then, like, where have you, done, you know, you're maybe not gonna tick them all off, but… you just pick a couple, look at the GTC standards and the ones that stand out.
>
> (Brack, Kennedy & McLeod, 2026, p. 63)

Some even may fail to see the standards as relevant to their day-to-day practice and whilst the GTCS may envision them as a 'way of being' for teacher professionalism, many teachers simply see them as an administrative tool for professional development and appraisal (Brack, Kennedy & McLeod, 2026). In Scotland, many of these 'conversations' are happening online, through Glow (Education Scotland's digital learning platform) and other platforms, using videoconferencing, blogging and discussion groups (Kizuka, 2019). This was happening even before the pandemic, but

when schools shut down in March 2020, teachers had to quickly get to grips with a number of online platforms for pupil learning and their own professional development (Kennedy, 2022). Teachers found increased access, choice and flexibility in how their professional learning was managed, according to Kennedy (2022), with gatekeeping becoming less of an issue than before, and whilst there were a number of challenges arising from digital learning there were also a number of 'affordances'. It is important now, in a post-pandemic world, to try to "capitalise on the affordances rather than simply slipping back into old norms" (Kennedy, 2022, p. 140), and many teachers have indicated that a hybrid approach to learning would be welcomed. In Brack, Kennedy and McLeod's (2026) review, teachers suggested that remote learning and online meetings held in areas outside of their own local authority would be advantageous to maximise participation for those unable to participate in, or feel restricted by, the opportunities provided by their own local authority.

Professional learning must be reflexive and relevant to contexts, with better application of knowledge and understanding gained through this process (Kennedy, 2022). However, much of the current process for teacher self-evaluation in Scotland potentially inhibits genuine critical reflection through procedural, relational and practical constraints (Brack, Kennedy & McLeod, 2026). Many years ago as a 'probationer' – a teacher engaged in the induction scheme immediately following ITE – I participated in a research project within my local authority that encouraged a reflective, critical stance as a beginning teacher. According to Cowan (2014), only up to one tenth of newly qualified teachers are able to reflect effectively on their practice. In order to support probationers to become reflective practitioners, mentors (called probationer

supporters) introduced the use of journals as a "vehicle for planned, effective self-reflection" with the intention of having "a positive impact on probationers' ability to discuss their practice with others" (Smith, 2008, p. 6). Few teachers are shown *how* to reflect effectively (Cowan, 2014) and this, according to Smith (2008), would allow the probationers to survive and flourish through meaningful consideration of practice and professional dialogue. Both types of reflection are required for the greatest benefits, if they are engaged in concurrently, and journaling with regular supporter input was a way to achieve this (Smith, 2008). Smith (2008) found that reflection is not something that happens automatically, and just providing a journal to record reflections in is not enough. Finding time and space in which to reflect in the journals can be a barrier, and structured guidelines may be needed to maximise the benefits, develop self-reflection habits, and see progress, according to Smith (2008), and there were also a small number of participants who felt that journal reflections really were not for them. Cowan (2014) notes that not only do some people find reflection difficult, but they may also fail to recognise its value, and journaling becomes fruitless in the process. I believe my own experience was one of initial reticence before recognising the value of formalising my reflections following professional dialogue with other probationers and my probationer supporter. Like others in Smith's study, I found that having a formal record over time of the development of my own thinking was extremely useful, particularly for gauging progress and impact. Smith (2008) was unable to determine that journaling could help develop good reflective skills, however there was a marked difference in the probationers' ability to provide high-quality and in-depth responses during feedback and monitoring sessions with probationer supporters, which suggests that reflection could improve greatly by asking the 'right' questions.

Many practitioners find true reflection difficult, and struggle to move past shallow, descriptive musings, according to McArdle and Coutts (2010) and Cowan (2014). The original concept of the reflective practitioner (such as Schön, 1983, to whom McArdle and Coutts and Cowan refer often) and how this has evolved in teachers' professional development thus far has fallen short of its potential impact, particularly when it is a solitary or internalised endeavour, whereas shared reflections and challenges to ones' own thinking can prove more effective (McArdle & Coutts, 2010). Having a shared purpose, and participating in shared sense-making, can bring together *agents of change* within a connected group, and McArdle and Coutts emphasise that this is bolstered by the reflections, conversations, and participation in that shared purpose to bring about renewed ideas and practices within their own contexts. A shared purpose may include a shared interest in supporting a particular group of learners, such as those with particular additional support needs (ASN). In an Australian study involving reflective journals as part of professional learning on teaching gifted learners, Plunkett and Kronborg (2011) noted that several participants experienced realisations – or even revelations – and a range of positive understandings as a result of reflections in their journals, and they also "provided a valid source of data about their journey of learning about giftedness" (p. 44). Moreover, the feedback demonstrated that even one module of input about giftedness had significantly enhanced their understanding of gifted learners and how to apply this in their context, which was in no small part supported by the opportunity for ongoing reflection and professional dialogue (Plunkett and Kronborg, 2011). Ring et al. (2019) researched the development of an autism-specific professional

learning programme which included a two-month gap after training followed by a period of critical reflection:

> which incorporated discussion with peers; interrogation of group case studies and class discussions on how the learning… was applied to practice.
>
> (Ring et al., 2019, p. 125)

The importance of effectively providing education and care for autistic children through building professional knowledge and teachers' confidence is addressed in literature, according to Ring et al. (2019). Providing an appropriate programme of learning, particularly one that is innovative, reflective and practice-based, can provide teachers who do not feel knowledgeable or confident with the necessary professional development to transform the lives of autistic children (Ring et al., 2019). Taking on board Deligny's views and inclusive education principles for autistic children discussed in the previous sections has led to the development of the Embracing Authentic Autistic Play series professional learning programme for this research, and the background, process, and outcomes of this can be found in the remaining thesis chapters.

Part two: Navigating the research

3. The Research Assemblage

> *An assemblage is not a set of predetermined parts (such as the pieces of a plastic model aeroplane) that are then put together in order or into an already-conceived structure (the model aeroplane). Nor is an assemblage a random collection of things, since there is a sense that an assemblage is a whole of some sort that expresses some identity and claims a territory. An assemblage is a becoming that brings elements together.*
>
> (Wise, 2005, p. 77)

i. Narratives and stories

I want to start this chapter by talking about stories. Stories of people, of place, of circumstances, of experience. According to Brabazon (2023), stories are very different to narratives. The narratives established in common discourse are the product of established repetition, of dominant voices, of expected historical depictions. But they are not the stories of lived experience in many cases, and they are not often the voices of the marginalised, the weird, the lesser known, or the othered. Instead, "narrative is a word and a trope that carries credibility… and carries power with it… through its relentlessness" (Brabazon, 2023, ch. 7). Narratives perpetuate the status quo and determine the dominant discourse. The purpose of a dominant narrative is to prevent critical thinking, to resist all other truths and facts, and crush their credibility. Including, or even prioritising, the stories give voice to the lesser known, the side-lined people who have valid, valuable and validating lived experiences to share, and contribute to new knowledge that would otherwise go unheard under the status quo. Researchers have the opportunity to challenge this, and "to write those different stories from the ones we've been hearing all our lives" (Brabazon, 2023, ch. 7). This study intends to do exactly that, through postqualitative research, which can be considered to be

> alternative research practices capable of engaging with the materiality of language and lived experiences, of thinking differently about the ways in which researchers and participants of research are entangled.
>
> (Lambert, 2019, p. 153)

ii. Different ways of thinking and knowing

In my 'different way of thinking' I note that my approach (and the written commentary of my approach) to the research ahead may look different – because it is different. As addressed when setting the scene of the thesis, posthumanism is the catalyst for postqualitative research, and it is a paradigm that questions the privileged nature of 'knowledge' and allows us to challenge knowledge without assumption of the 'ideal' human (white, able-bodied, male, etc) being the gatekeeper of said knowledge. We can 'trouble' the knowledge from an alternative position of the less-privileged, more diverse identities, genders, communities, cultures and (dis)abilities. I myself am an autistic, neurodivergent, disabled researcher, and I take this role seriously not only with regards to my identity as a member of these communities, but also for pioneering research into areas that have thus far been explored primarily by non-autistic, neurotypical, non-disabled researchers with an entirely different positionality to myself. This includes the standards and expectations of thesis writing that have come along with these mainstream positionalities and views. Regardless of this difference, my thesis is robust and it gets the job done just as well. In the vein of telling stories of the othered, I recall in my master's dissertation there was a comment from one of the markers which asserted that my written work is 'a little unusual' but it is of an extremely high academic standard. I carry that story with me, and I wear it as a suit of armour, or even a badge of honour perhaps. I refuse to take that as the derogative slight it was perhaps intended to be, but I

instead embrace the unusual along with the high academic standard. This informs my research, it informs my writing, it informs my philosophy. In the philosophy of knowledge, we should recognise that research inevitably has 'Three Wise Monkeys' known as ontology, epistemology and methodology, and Brabazon (2023) emphasises the literal titular nature of philosophy within the *Doctor of Philosophy* programme. One cannot avoid philosophy in a PhD, even if it has meant countless sleepless nights pondering the ins and outs of those three wise monkeys and what they mean to me.

Helpfully though, for my gestalt preferences for learning such things, Enosh and Ben-Ari (2016) discuss research as being akin to a journey, with ontology, epistemology and methodology being among the tools needed to take that journey. For most journeys into the unknown, we take a map – but there are different kinds of maps – and the map is never identical to the territory being mapped. The map is a representation of the reality we see, from a particular perspective, and different maps can highlight different aspects of the land we plan to traverse. Depending on the journey we are taking (a short hike or a trip around the world, for example), we are going to choose a different perspective, and the map might have a unique key or legend to help us figure out the best way to go for our circumstances.

The map as it is drawn, is the ontology. It represents reality, but only from the perspective of the person who draws the map, and it may even look different to other maps covering the same territory. Ontology is a cartography of objects, a rubric that gives us the lay of the land, and like a map it can show us "the concrete and the abstract, existent and non-existent objects, the real and the ideal" (Brabazon, 2023,

ch4). The reason behind the map including those particular aspects, details, routes and boundaries (based on the perspective of whoever drew the map) and how it represents reality, is the epistemology (Enosh & Ben-Ari, 2016). Brabazon (2023) furthers this by stating that epistemology "maps out the limitations of what we believe, what we think is true, and what we think is important" (ch. 3) – a great deal of foundational belief of reality underpins this, we know our starting point for the map, we know the area we need to cover, we know that keys and legends represent important aspects of the map that we can see exist in reality. Epistemology is our justification of how the things on the map represent the reality that we see. This will be different for different people within different contexts, according to Enosh and Ben-Ari (2016), and "the decision of which map to choose, and how to draw it, depends on the human being and his or her goal" (p. 579).

Methodology too, throughout the years, has tripped me up and made me stumble over my research. So, in honour of this research into authenticity, I seek to define methodology in an authentic and straightforward way so that even I (in my literal autistic brain) can grasp the purpose and meaning in a way that the textbooks never helped me with much. We have all heard the phrase that says, "the definition of insanity is doing the same thing over and over and expecting different results" (often attributed to Albert Einstein but quite unlikely to be true due to it seemingly being coined several decades after his passing), and Brabazon (2023) gives her mother credit for a similar axiom and proposes that methodology is a bit like this. We ought to show how our research avoids doing the same thing over, expecting different results to those who have come before us. Certainly, the purpose of this research is to *oppose* the studies (and the resulting

discourses) that have been done over and over and I, as a critical researcher, absolutely intend to have different results. The research is novel, aims to contribute new knowledge to the academy, and aims to have potential impact on the inclusion of autistic children in Scotland. As researchers looking to the future, however, we do of course need to lay out how our research can be done in all the same ways as it was before, but *without* expecting different results. Yes, we want to produce new understanding, but we should want to produce new understanding that can exist outside of our own research. Replicability traditionally indicates that the same (or similar) results should be expected, with methodology and methods outlining ways to optimise the likelihood of this. However, as will be addressed in the next section, there is a school of thought that methodology can instead allow for contextual and situated knowledge to emerge naturally without immaculate replication being required.

Considering methodology as the general strategy for my research – and Brabazon (2023) notes that not all researchers feel the need to limit themselves strictly to the methods and strategies best-known in their disciplines – I wish to pull this chapter together not as a response to the methods used in the research as is commonly expected, but as an overview of the research assemblage as it applies here. To do so, a number of 'rhizomatic' objects and concepts come together and are entangled in the becoming of the research. This will, I hope, come to make sense by the end of the chapter.

iii. Becoming Posthuman

In my original proposal, at the beginning of my doctoral journey, I had declared that I wanted an investigation that was informed, innovative, relevant and realistic, using a

pragmatic perspective to focus on "what works… valuing both objective and subjective knowledge" (Cresswell, Klassen, Clark & Smith, 2011, p. 4). Knowing that this felt too simplistic for my aims, an extended proposal then expanded on this to include a neurodiversity perspective. The neurodiversity movement, according to Kapp (2020), practices 'critical yet reformist' pragmatism among autistic rights advocates and this felt closer to my own world view. I still felt it was lacking somewhat, and though I wrote that it rang true with my philosophy on autism research and lore, because there was a 'gospel truth' held in schools and clinical settings, with many professionals accepting what is 'known' about autism. My inclination towards pragmatism stemmed largely from an anti-positivist standpoint, as the majority of autism research has, in the past, been positivist in nature, including behavioural psychology and medical models of scientific enquiry. Pragmatism, according to Johnson and Onwuegbuzie (2004), endorses fallibilism as well as acknowledging language, culture, and the existence of physical elements, but focuses on the desired outcome or ends of the research. I felt an incompleteness in this, but it seemed like the most acceptable way to frame my research within the limitations of my knowledge at the time. As the saying goes, close but no cigar. In the end, this was not my approach at all. Instead, I since came to understand that taking on a critical posthumanist lens for research potentially encourages researchers to ask deeper questions surrounding power, normativity, participation and difference (Sidebottom & Bancroft, in press) and through posthumanism I have indeed found the completeness that I sought – not only in my philosophical stance but in the makeup of my research as a whole.

Much like Ulmer's (2017) 'initial discomfort', the transition from pragmatic to posthuman researcher was an uneasy one for me. Where Ulmer conjured up post-apocalyptic zombies at first, I envisioned robots, AI and futuristic activists when I first loosely encountered posthumanism as a lens for research. This was around the time I began studying the ethics of data collection and analysis in 2022, still naively squeezing my world view into the pragmatist paradigm I had come to settle for in my educational research over the previous decade or so. When I (re)discovered posthumanism at a professional learning network meeting in 2023, it was when Kay Sidebottom talked about teacher professional learning through critical posthuman theory. Sidebottom (2024) explains this by first pointing out that critical posthumanism, contrary to popular belief, is not about technology and robots, or humans merging with machines. It is a lens that recognises complex issues, entanglements, and dominant discourses. Critical posthumanism emerged in response to rigid views of what 'human' is (the normative ideals of 'man', for example) and embracing difference as a transformative concept through which we can re-imagine life as we know it (Sidebottom & Bancroft, in press). Of particular interest to me was the notion that critical posthumanism challenges the problematic notion of Other, or lesser beings in the human race, the damaging hierarchies with the "normative, white, male, Western, able-bodied, neurotypical, straight version on 'Man'" (Sidebottom, 2024, online).

In this sense, it supports critical inquiry that honours the experiences of marginalised people – including their perspectives, voices, and participation in research – and seeks to understand the knowledge of diverse groups (Ulmer, 2017). Epistemologies that take a standpoint around aspects of human identity (such as race, ethnicity, gender,

sexuality, class, culture, spirituality, ability and language) and aim to create a more just society, have contributed to (but are not the entirety of) posthuman research approaches. In addition to these human-centred critical theories, "justice is also material, ecological, geographical, geological, geopolitical, and geophysical. Justice is a more-than-human endeavour" (Ulmer, 2017, p. 2). In the context of education, what Sidebottom (2024) helped me establish about posthuman research is that teaching and learning is shaped by more than the humans in the environment. We can centre ourselves as researchers by being aware of our own biases and privileges and simultaneously decentre ourselves by acknowledging influential others in the environment (Sidebottom, 2019). This goes beyond typical methodologies in educational research, and "posthuman thinking also elevates the presence and agency of the material in the production of knowledge" (Sidebottom & Bancroft, in press). Notable posthuman theorist Rosi Braidotti argues that while the critical posthumanities are, by their nature, trans-disciplinary discourses, academic humanities and social sciences can benefit from "curiosity-driven knowledge practices that do not coincide with the profit motive of cognitive capitalism" (Braidotti, 2019, p. 53). Furthermore, Braidotti contends that in current circumstances, in the face of potential change and transformation, critical thinkers may be left with little alternative than to embrace the posthuman turn. The critical posthumanities hold diverse perspectives and potential for change with a dynamic (or 'nomadic') frame through which we can explore our disciplines and represent the people and things 'missing' from them. As a result, "the critical posthumanities can be the epistemological vehicle for this this project" (Braidotti, 2019, p. 53). As well as being an epistemology for such research, Sidebottom (2024) notes that it can align with researchers' ethical and ontological positions as well.

For me, upon realising that posthumanism (in various forms, not just the critical posthumanities) aligned easily with my own views as an ethico-onto-epistemology, I felt an immediate sense of relief and excitement. I realised that, in spite of my previous judgements of posthumanism, I had already been practicing it without realising it and at first this was difficult to get my head round. Many of my go-to phrases, such as "challenging the dominant discourse" and "radical acceptance of authentic autistic play" (Guthrie Stirling, 2023) as well as looking at "the critical reflection involved in questioning the norms and values currently held" (Guthrie Stirling, 2022), were already exposing me to the academic world as an 'alternative' thinker. Ulmer (2017) notes that many researchers directly or indirectly expose themselves as posthumanists under other methodological guises – new materialists, feminists, poststructuralists – within a "playground of theoretical concepts" and some try to "suture different methodological perspectives together" (p. 3) but I had unwittingly bypassed these altogether.

Much of my previous understanding of pragmatism was based on an assumption that pragmatic theorists were 'just' pragmatic, but even that most notable of theorists had blurred the lines. For example, John Dewey developed theories on morality, epistemology and politics that gave rise to ideas of people (and other organic beings) as being simultaneously produced *of* and *by* their worlds, with a pragmatic notion of the nature-culture relationship (Fischer, 2018). Though Kremer (2014) proposes that the pragmatism of Dewey can be a viable alternative to posthumanism, I am (now) inclined to disagree. Evidently Kremer declares that pragmatism trumps posthumanism but seems to make generalisations in terms of posthumanism, and denounces transhumanism in particular, claiming that it advocates for the destruction of the

human world. I now know that this is *not* what posthumanism is about, and Dewey's pragmatism is not what many view pragmatism as, either. Though pragmatism is in its origins a humanist philosophy, Snaza (2017) points out that Dewey was never 'easily' humanist, which created an ambiguity of his actual ontology, especially given his considerations of the environment and the non-human elements of the classroom in education theory. Furthermore, his early connections to Jane Addams, "a leading figure in the areas of social reform, women's suffrage, and opposition to war" (Striano, 2020 , p. 375), Nobel Peace Prize recipient and first wave feminist, substantiate a different view of Dewey's pragmatism that can be connected further down the line to new materialist perspectives (Thayer-Bacon, 2019) and from feminist new materialism to posthumanism (Fischer, 2018; Tuana, 2021). Though not applicable to all strands of pragmatism, Guernsey (2017) goes as far as claiming that Dewey's pragmatism could adequately pass as a philosophy 'on its way' to posthumanism. Kerslake (2018) decidedly notes, however, that "there are a number of incompatibilities between pragmatism and posthumanism" (p. 6) and to claim parity between these two in educational philosophy is inconsistent. Despite the ambiguities Dewey was undoubtedly a pragmatist, according to Snaza (2017) disparate from posthuman theorists – though some like-minded colleagues of his were credited for contributing to the underpinnings of posthuman scholarship. Pragmatism's core concept of experience and posthumanism's core concept of entanglement make the erudite comrades, according to Gherardi (2022), as cohabiting epistemologies that latterly (thanks to Dewey) share a critique of the humanities under the umbrella concept of practice-based studies. Posthumanism, however, takes this critique further by enmeshing epistemology, ontology and ethics, and brings with it renewed concepts of data,

method and research apparatus (Gherardi, 2022). Ulmer (2017) qualifies this by stating that "posthuman approaches to knowledge are marked by difference, even within themselves" (p. 5), requiring alternative ways to thinking, taking an imaginative leap in research.

This creative exploration was exactly the spark that my research had been missing. In an early supervisory meeting, when discussing the merits of a systematic literature review, I clumsily explained to my supervisors that 'systematic' did not feel right for my research, despite being seen as the 'gold standard' for literature reviews. My approach to the literature was more curiosity-driven and exploratory, because it felt to me like it should not be "a regulated set of steps to be taken towards the realization of some predetermined end" (Ingold, 2015, in Ulmer, 2017, p. 7). Standardised methods, according to Ulmer (2017), provide little other than a false sense of security that knowledge is stable, and scholars should resist setting concrete boundaries on how research is done. Within an academic context, regardless of how desirable an outright rejection of standardised methods might be, it is unlikely to be altogether avoidable. This, however, should not prevent us from producing "something different, something generative, and something wildly imaginative" (Ulmer, 2017, p. 8). Methodology need not create something immaculately replicable or pave the way for future research but instead allow for contextual and situated knowledge to emerge (Sidebottom, 2024). According to Ulmer (2017) the basis of the research (and the methodology around it) need not be altogether novel, but the openness of posthumanist researchers to think differently can ward off a reliance on prescriptive approaches embedded within fields of research which are less likely to allow for creativity and imagination.

iv. Humanist principles and Nussbaum's capabilities approach

In education, the narratives that monopolise credibility and power lie within humanist principle, taking the example of Martha Nussbaum's capabilities approach from the literature. It has been considered already that the philosophical underpinnings of the ten capabilities supposedly based on social justice aims were contradicted somewhat by the deterministic and limited scope for individuality, context, societal/cultural norms, or personal agency and beliefs. Holding considerable sway in many education systems in recent decades,

> Nussbaum's thinking has a clear philosophical and ethical basis, grounded in the ancient tradition, stretching back to Socrates, Aristotle, and the Stoics, but also takes account of the modern philosophy and ethics found in the work of Adam Smith, Immanuel Kant, Karl Marx, John Stewart Mill and John Dewey.
>
> (Gluchman, 2018, p. 328)

Braidotti (2006), with 'courteous disagreement' brands Nussbaum's ideas a neoliberal version of Kantian Cosmopolitanism. According to Robinson (2025), neoliberalism holds a claim of being pragmatic about human nature, acknowledging self-interested and transactional motivations as opposed to any magnanimous virtues or altruism towards others. This, however, leads to the notion of people as products, reduced to the result of a set of outcomes (Milton et al., 2019). The Kantian rationalist vision is regarded as even more problematic by Braidotti, Blaagaard and Hanafin (2013), including the universalistic assumptions around reason, moral values and human rights. Its legacy has been challenged and contradicted in contemporary times by phenomena such as the rise in modern warfare and the stark societal inequalities of the last few decades.

Where Dewey attempted to focus on cultivating a democratic society and its values on a more contextual basis, Nussbaum sought to globalise the ideas based on similar philosophies as Dewey on a much larger scale (Braidotti, Blaagaard & Hanafin, 2013). Too large perhaps and it seems in doing so failed to suitably take into account global contexts, differences and inequalities (Gluchman, 2018). Though challenging classical ideas of social justice, according to Raffaghelli (2023), Nussbaum's attempt to defy the limitations of "white, able-bodied men who can work and vote" falls short in terms of triggering "the necessary antagonisms through which the positions of the individual or excluded groups can be defended" (p. 9). Nussbaum's philosophy (and thus the philosophies that underpin her ideas) fails to acknowledge that not all difficulty or difference is external to the person, because there exists a natural diversity to humans that cannot be overlooked (Gluchman, 2018). To gloss over this in such a way is counterproductive and fails to address "dignity for all human beings regardless of race, gender, sexual orientation, religion, ideology, ethnicity and so on" (Gluchman, 2018, p. 335). Dewey had more of an emphasis on the uniqueness of (and differences between) people, with potential for a more inclusive society (Striano, 2020). Nussbaum is fundamentally a humanist, believing in a 'best way of living' for humanity, and relies too much on the negative impact of not living up to ideals rather than celebrating human diversity – assuming the suffering or depravation of those who do not live up to humanist ideals (Gluchman, 2019). Often focused on monetising the solutions to this so-called suffering and depravation and furthering this perspective for profit, we have long been living in a capitalist era in dangerous combination with these ideals, but as teachers we can "either passively reproduce or faintly coup against the problem" (Psarologaki, 2023, p. 14). This 'faint coup' can be achieved through some minor

gestures advocated by a number of posthuman scholars, through a philosophical framework that challenges the dominant discourse and troubles the knowledge we perceive to have around education research.

v. Posthumanism in education research

Posthumanism, according to Braidotti (2019), can provide a philosophical framework for understanding ongoing 'becoming' (of humans and non-humans) in a more complex analysis of dominant discourses across disciplines. Through the kind of ontology suggested by Braidotti, there is a "possibility of newness within every event/encounter [which] is delivered through a writing that turns away from the human" (Naraian & Gabel, 2023, p. 181). While we may argue that humanists (and similarly minded neoliberals) such as Nussbaum may undervalue individuality and diversity of humans and reject the idea that external circumstance is the only barrier to the embodiment of humanist, posthumanist theorist Karen Barad (2003) suggests that we must not assume individuality is inherently attributed in a vacuum. According to Barad (2003), "there are no such independently existing objects with inherent characteristics" (p. 201) in either physics or metaphysics (and she calls into question whether these two are even mutually exclusive). Instead, individuality and identity are fluid, in the sense that they do not pre-exist, but come about as a result of entanglement with continuously inter- and intra- acting phenomena, ever forming and re-forming through lived experience (Leibowitz & Naidoo, 2017). In education we may recognise this through elements (such as space, time, resources, artefacts, teachers and pupils) being actors in an assemblage. Wise (2005) illustrates that assemblages also include the making and unmaking of systems, institutions, organisations, practices and habits that intersect

and open up possibilities that are unknown until they are in becoming. In this light, learning occurs within the assemblage with all the entities playing their parts in giving rise to new possibilities and knowledge, according to Leibowitz and Naidoo (2017), we can reject the assumption that learning is a developmental trajectory that all humans must follow in the same way, and put simply:

> Posthumanism allows us not to see students as requiring to travel a predestined path from not knowing to knowing and from being deficient to having skills.
>
> (Leibowitz & Naidoo, 2017, p. 160)

Gilles Deleuze and Felix Guattari have been 'inspirational' for those researchers delving into posthumanism, with theories that have been developed into a range of methodological approaches (Renold & Mellor, 2013). Deleuze and Guattari's theoretical perspectives within the field supports "loosening a few long-established knots" in education and childhood research (Olsson, 2009, p. 93). Teachers in Scotland are encouraged to take part in research and practitioner enquiry, as raised in the literature, but if the questions they are asking are based on the same preconceived ideas that have dominated education practices for decades nothing will change, according to Olsson (2009). Renold and Mellor (2013) acknowledge that research based on traditional methods and methodologies may have been unable to access approaches that work well within education and childhood if there are limited opportunities for children's voices to be included if they "have a limited vocabulary (or simply do not talk), do not read or write" (p. 23) or act in ways that seem challenging for observers to comprehend in an authentic way. Importantly, according to Renold and Mellor, the underlying principles of posthuman theory from Deleuze and Guattari remind researchers that voices and stories do not just exist in text and language, but in material, affective, and

communicative practices of movement and touch, particularly in circumstances where verbal utterances may be few or absent altogether. These actions, too, form part of the assemblage – notably in a non-hierarchical (un- or de- stratified) fashion where no one type of information is more acceptable than others. Crucially for my own research considering authentic autistic play in classrooms within a play pedagogy in Scotland, it "involves attending to frequently passed over pleasures, powers and dangers of everyday scenes in the [classroom]" (Renold & Mellor, 2013). Deleuze and Guattari suggest allowing ways for research to subtly challenge the status quo, making minor gestures towards change rather than attempting major shifts in the understanding of education and social justice, as this can lead to more contextual social change and lead our thinking down different, less anticipated avenues (Sidebottom & Bancroft, in press). In particular, postqualitative methodology in this 'minor' sense, is not intended to create something that is wholly replicable or as a step-by-step guide for future research, but instead is an emergent knowledge situated in context, envisioning ways in which the data can be beneficial where it otherwise may be overlooked (Sidebottom & Bancroft, in press).

vi. Children, desire and currere

According to Sidebottom and Bancroft (in press), implementing a posthuman approach potentially empowers children and young people to express their bodies and activities (such as play, for example) with more agency and freedom. Deleuze and Guattari often frame theory and practice through the concept of desire, Olsson (2009) notes. In the Deleuze-Guattarian sense, desire is seen as neither the libidinal drive of Freud or a sense of lacking per Lacan's view, but of imagination, conception and possible

production (Psarologaki, 2023). With young children in particular this can be an unrealised version of production or action, it may express how they wish to communicate and play, and

> when desire is no longer defined as lack… the gaze of the teacher on children completely changes… Teachers can then arrange situations where it is possible for the children to continue to deploy their desires within everyday life.
>
> (Olsson, 2009, p. 99)

Replacing a judgement of 'lack' or 'need' and looking instead for imaginative and productive desire, teachers can shape learning and pedagogy around producing new realities rather than judging children against standardised categories of 'normal development' or age-appropriateness. Like myself, Olsson (2009) did not openly pursue 'desire' as a research concept, but it can prove useful in creating inclusive pedagogies (ultimately the overarching aim of this research). In such a pedagogy, teachers could enact a 'relational encounter' which could be considered *currere,* situated somewhere between the known curriculum and the actual experience of learning, taking them beyond formal learning and creating numerous possibilities for growth (Psarologaki, 2023). A 'utopian' currere situates pedagogy even more specifically among multiple learning components (the assemblage) and,

> in this context, we can define the verb currere as to contemplate and exercise an educational human-to-human experience… which can be effectively post-human… and has – or ought to acquire – a post-humanist dimension.
>
> (Psarologaki, 2023, p. 32)

le Grange, among others, expands on currere by piggybacking on the African philosophy of *Ubuntu* meaning the state of being and becoming, continuous folding and unfolding of human beings (Du Preez, le Grange & Simmonds, 2022). Ubuntu-currere can be a response to social injustice, a curiosity around new ways of connecting with the world,

and "opens up multiple coursings for developing posthuman sensibilities" (le Grange, 2019, in Du Preez et al., 2022, p. 16). Pedagogies should be approached as a force in a constant state of tension, an entanglement, with lines of consolidating activity (becoming), as well as lines of fracture, breakage and disrupted flow, and as such can be mapped and corporealized as a cartography of the learning landscape (Grinberg, 2013).

Fernand Deligny, captivated by both autistic children's ways of being and cartography, combined his interests somewhat incidentally (accidentally?) in his *attempt / tentative / open-ended experimentation* in the French Cèvennes (van Heerden, 2017) but was previously intertwined with Deleuze and Guattari through his work in various institutions. Noticing patterns in their activities, he eventually began to trace their movements and journeys, calling these the 'wander lines' according to van Heerden (2017), and this concept intrigued Deleuze and Guattarri leading to their conception of the *rhizome*. The rhizome is a tangle of spaghetti: it has no beginning and no end; it is interwoven and entangled; it connects potential and becoming; and it "carries enough force to shake and uproot the verb 'to be'" (Deleuze & Guattari, in Olsson, 2009, p. *xx*). This, Dahlberg and Moss (in Olsson, 2009) contend, leads to a more emergent pedagogy made of myriad, overlapping, complex assemblages. Deligny in a sense, however, rejected pedagogy altogether – a radical defiance against the institutionalisation of autistic children that he encountered in previous roles (Krtolica & Sibertin-Blanc, 2019). Such was his mission, one that is unlikely to be truly replicable by modern day educators or researchers but, as Psarologaki (2023) previously suggested, it is perhaps within our purview to 'faintly coup' against it. Deligny took issue with his own limited

experience of pedagogy, which specifically related to the intervention-based 'special education' of children with disabilities and resented the problematisation of these children, according to Krtolica and Sibertin-Blanc (2019). Adopting a pedagogy more akin to ubuntu-currere could go some way in overcoming this. In terms of what this means within education research, we can perform emancipatory acts of critical praxis, practice in the 'risky gaps' of education, and

> we must rethink our ontological vocabularies and words that frame education and pedagogy, towards the learning of and for a people-in-becoming… and new, more diverse meanings in culture, citizenship, and democracy.
>
> (Psarologaki, 2023, p. 40)

vii. Critical posthumanism

Braidotti (2006) makes a point of cultivating 'joyful transformation' of any dialogue that commodifies and trivialises counter-cultures – perpetually focusing only on the negative affect of 'suffering' – into positive affect and desire to live one's life authentically from birth until death. As a contemporary philosopher of both feminism and posthumanism Braidotti's work derives from theorists including Deleuze and Guattari but, according to Ross (2021), her concepts provide a specific critical posthuman theory that offers a framework for posthuman knowledge production suitable for novice and experienced academics alike. Braidotti (2019) positions critical posthumanism as an 'epistemological vehicle' – and so posthumanism can thus be considered both an ontology *and* an epistemology. Naraian (2020) notes that this notion of 'onto-epistemology' can result in the mutual constitution of knowing and being. Critical posthumanism can 'invigorate' education research without foregoing relevant

social justice concerns, offering alternative understandings' through Braidotti's framework as well as embracing Barad's quantumist theories as complementary enrichment to critical posthumanist research (Du Preez et al., 2022). Barad establishes that

> An ontology of mutually emergent entities restores agency to matter, and undercuts representationalism in an epistemology that eliminates distance between knower and what can be known.
>
> (Fischer, 2018, p. 90)

Fischer (2018) illustrates that, while Barad's theory strongly echoes many pragmatist (particularly feminist-pragmatist) philosophies, it brings together feminist and queer theories with scientific understanding to reject notions of the passivity of meaning being etched by culture and experience, creating a posthumanist idea of intra-activity. Through this inter- and intra-activity, researchers by necessity must explore not just the human agents within their enquiries, but the non-human, material and technological agents that can both influence the actions of the researcher but also affect the production of knowledge (Sidebottom & Bancroft, in press). As Ulmer (2017) highlights, "there are many posthumanisms and each offers different twists, turns and ways of thinking about methodology" (p. 1) though critical posthuman theory lends itself well to postqualitative research in particular. Furthermore, "Barad (2007) claims that epistemology and ontology are entangled with ethics in an inseparable manner that she terms an ethico-onto-epistemology" (Mitchell, 2017, p. 171) and this captures a more vast range of possibilities and dynamisms than with the limitations often imposed by humanistic viewpoints. In practice, it is increasingly appropriate for education researchers (particularly those working with young children) to consider alternatives to 'normalising and regulating' assumptions of the developmentally-based theories

through which "highly classed, raced, gendered, sexualised and age-appropriate notions" of childhood are perpetuated (Renold & Mellor, 2013, p. 25). Through notions such as this, a number of misnomers around autism and play exist in the dominant discourse, which this research aims to challenge through the framework offered by critical posthumanism.

viii. Normative expectations of play and autism

Considering play to be absent in autistic children's lives is not an uncommon view and, even though there are also some those who recognise that autistic play exists but is different to non-autistic play, the underlying assumption is that autistic play is flawed and undesirable and must be replaced by appropriate, desirable play (Wolfberg & Woods, 2023). This was the prevalent view for many years, with one author noting that they

> wonder about play's universal purpose and place in the life of children as well as its conspicuous absence in children with autism… history has shown that perceptions of play's purpose and place in childhood are forever shifting with the Zeitgeist, there is abundant literature documenting play's significance for children's learning, development and sociocultural participation.
>
> (Wolfberg, 2009, p. 3)

However, the author recanted the above outlook in recent literature – now situating the idea as a harmful, erroneous belief perpetuated only by those who wrongly believe normative play to be the gold standard – noting instead that

> By reinterpreting what constitutes authentic play, we validate what is meaningful for the players… Becoming familiar with autistic children's play variations may further allow us to become more attuned to how they express themselves.
>
> (Wolfberg & Woods, 2023, p. 219)

Though the types of play demonstrated by autistic children beyond typical expectations and norms are unique to autistic play culture, either by their quirky nature (as fondly described by Mitchell and Laschewicz, 2018) or by the levels of interest, intensity, frequency or pace that defy normative benchmarks, instead of being celebrated as cultural diversity they are dismissed as 'lacking,' 'limited,' 'odd' and at a 'lower level' than their peers (Papoudi and Kossyvaki, 2018). Play observations based on these normative expectations are likely be challenged when it comes to autistic children, and Papoudi and Kossyvaki (2018) suggest that how much we respect autistic children's authentic play should be reconsidered.

Play as a concept has often been linked with the 'proper' development of children in society, according to the cultural norms of the time, and society has almost always concerned itself with how play can contribute to the social behaviours and expectations deemed appropriate in adulthood (Briggs, 2019). Long-standing theories of play, including popular hierarchies proposed by Piaget and Parten, have defined types of play based on social and cognitive development according to Eisele and Howard (2012). In Western society from the mid-twentieth century onwards play was often considered vital in the civilisation of children by learning the most 'correct' ways to interact with others in society, according to Briggs (2019), and play became a significant measure in the recognition of normative development towards maturation in the race to become useful members of adult society. In traditional 'ages and stages' understandings of play, often the most basic and playful activities (such as 'acting out' with toys, narrating stories through play objects, using sound effects and setting up play scenes) are assumed to decline throughout childhood and past this era of childhood there is a

presumption that children will move on to more purposeful activities (Hashmi, 2023). This progressive, hierarchical rhetoric is problematic, according to Willans (2020), as it views play as goals to be met within specific time periods and if said play occurs outside of these time periods (or not at all) then the play is considered 'fundamentally wrong' and the child is deemed to be in need of remediation. If autistic children are under- (or un-) represented in standardised measures of play, as Hancock (2020) suggests they could be, a great deal of misunderstanding around autistic play potentially leads to adults' attempts to extinguish or modify some children's play activities unnecessarily. Through critical posthumanism we can trouble normative assumptions of linear development 'ages and stages' in childhood and education and challenge the limitations of the current inclusion agenda (Sidebottom & Bancroft, in press).

Play is a uniquely individual endeavour, and can be characterised as happening through intrinsic motivation, free choice, personal direction, with the player's own ideas done in their own way, to their own ends (Howard & McInnes, 2013). Despite this characterisation of play being applied freely to what is considered normative play, it is rarely considered 'appropriate' for autistic children to play in their own way with free choice or personal direction. What comes naturally to autistic children (such as throwing sand to see how it moves in the wind or spinning a bike wheel to see the light reflecting off of it) is seen as inappropriate behaviour inconsistent with normative expectations of play, perhaps even seen as 'problematic' or 'challenging' to some professionals (Willans, 2020). It is ethically questionable, according to Wolfberg and Woods (2023), to expect autistic children's play to match that of non-autistic peers, and

doing so can have significant repercussions on their social and emotional wellbeing. It may take 'a heavy dose of humility and introspection' through critical reflection and respectful interpretation of the thoughts and actions of autistic children at play in their own surroundings, in order to better serve the children in our care and facilitate authentic autistic play (Wolfberg & Woods, 2023, p. 226).

Undoing these long-held misconceptions is not easy, according to Olsson (2009), but theorists Deleuze and Guattari suggest some perspectives within childhood and education that loosen some of the 'long-established knots' in the field. These theories can offer a way to take account of the whole picture of a child's experience through the rhizome – an interwoven, tangled spaghetti of potential and becoming, with the context around the child being accounted for in their 'assemblage' of people, place, objects, time and space (Olsson, 2009). Deleuze and Guattari came to this theory of the rhizome through connections with Deligny. The children's freedom from society's expectations in the French Cèvennes mountains allowed them to traverse wherever they pleased without interference, and this wandering captured Deligny's interest. The maps he created from their wanderings influenced Deleuze and Guattari's theories on the milieu (surroundings) of rhizomatic systems (Krtolica & Sibertin-Blanc, 2019). Deleuze and Guattari's theories on the spaghetti-like rhizome, taking account of each child's assemblage, highlights this connection between the milieu (surroundings) and the child's play – connecting the human to the non-human, potentially changing our perspective on what play is or ought to be and in accepting Deligny's approach to the 'just-thisness' of autistic ways of being through a critical posthuman lens, we can start to trouble what is known in applied autism research.

ix. The assemblage of my research

Each element of my research is not in itself a novel approach to educational research. As an assemblage of elements within a whole, however, it is completely unique. An initial literature review, though commonplace in a doctoral thesis, is often a linear and structured process. In my case, however, it was unsystematic and unorthodox – following the literature down a curiosity rabbit hole until a cogent structure emerged from the wild scribbles of reading and writing, forged together from seemingly unrelated puzzle pieces. At one point, the literature became so inspirational that it quite literally changed the course of the research. The discovery of Briggs' (2019) take on Deligny's 'reinvention' of autistic play became a fundamental basis for steering my work focus towards radical acceptance of authentic autistic play, and evidently my first step towards embracing a posthumanist lens although I did not realise it at the time. This discovery in itself echoes what Sidebottom (2024) refers to as the process-led nature of posthumanist research where the researcher should acknowledge "the non-human, material and technological agents that influence researchly activity and the focus of the project" (online).

I now know that posthuman does not equate to a complete absence of human involvement. Teachers in their classroom assemblages have agency, according to Strom and Martin (2022), but the teaching is mediated by teachers *and* material elements, like the physical space, available resources, and less tangible elements such as routines, policies, and sociocultural expectations. In Scotland, experienced teachers have further expectations placed on them to "identify, plan and develop their own

professional learning needs… as they progress through their careers" (GTCS, 2021, p. 6). The Covid-19 pandemic brought digital resources and the use of online modes of learning to the forefront of education, including solutions for teacher professional learning in the absence of face-to-face opportunities (OECD, 2020). MOOCs have the potential to shift the focus of learning to more independent forms of study and discovery, according to Buchem, Amenduni, Poce, Michaescu, Andone, Tur and Smitek (2020), and this can be further enabled through a 'mini-MOOC' in the form of a small private online course including integrated short lecture videos with quizzes and reflective tasks. Mini-MOOCs have a more focused learning area than most online courses, with a narrower scope aiming to develop a specific skill- or knowledge-set (Spector, 2014). Morris (2019) highlights some potential barriers to self-directed learning including time restraints, financial restraints, and inequity of resources. Bite-size chunks characteristic of mini-MOOCs potentially suit the modern landscape well and provide the opportunity to focus on specific skills and knowledge required by individuals and organisations, offering an attractive low-cost solution for professional development (Andreatos, 2015). Though MOOCs seem to require prior experience of self-directed learning to maximise success, according to Morris (2019), this may potentially suit Scotland's teachers well as they progress through the standards (GTCS, 2021). The concept of continuous self-directed learning and criticality has been weaved into the revised GTCS standards more heavily than ever before, particularly emphasising the importance of challenging conversations. Teachers can do this by critically examining their personal and professional attitudes and beliefs, challenging their assumptions and practices, and looking at the connections between them for bringing about transformative change in practice (GTCS, 2021).

In line with this, critical (self-) reflection emerged as the main tool for maximising the efficacy of my professional learning programme, with the aims of this described by Cole et al. (2022) and Korthagen and Nuijten (2022) as critical thinking applied to individual experiences, where they ask themselves probing questions to generate meaning from particular circumstances, using what they already know to bridge any gaps between theory and practice, introspectively questioning what they have learned anew from this situation, thus allowing them to make changes to their practice as a result of their newly acquired knowledge. Providing teachers with ongoing opportunities to take part in, analyse, and reflect on their practical experiences lays the groundwork to "understand the type of ongoing, in-the-moment, joint production of teaching grounded in equity and social justice principles… within often-challenging contexts" (Strom & Martin, 2022, p. 9).

Throughout the research, I have implemented the tool called "5 Critical Questions" (Sharratt, 2016) as a potential focus for those who feel confident in reflecting critically, as well as a possible strategy for those who are still honing these skills in this area. Though they were originally written as prompts for discussion during learning walks and talks, and paired discussions at staff development meetings, the 5 Critical Questions deliberately end with "where can I go for help?" as the final prompt, to engage the participant to continue critical reflection in practice within their own assemblages. I chose Sharratt's (2016) "5 Critical Questions" to act as probing questions that help make meaning from the circumstances they find themselves in, allowing participants to consider new and different learning and understanding within their own context.

Without including specific prompts about the wider human and non-human elements of their classroom assemblages, I offer the opportunity for participants to reflect on the influences upon their circumstances on their own whilst allowing for prompting in this area as part of the semi-structured interview that participants who complete the professional learning programme will have the opportunity to take part in.

Having piloted the professional learning programme prior to releasing the app, I felt happy that drawing on a posthuman lens supported an acknowledgement that everyone's learning – the teachers participating in the pilot and my own learning about developing the programme – is a process of 'becoming'. It felt comfortable to me that whatever the participants learn in the programme, following it up with the critical reflection throughout the process and acknowledging that going somewhere for 'help' is also a part of the process, their becoming would be an ongoing process where they would begin to question themselves, teaching practice, and education as a whole. One pilot participant announced that they would no longer take things for granted and instead would begin wondering "is it really what we should be doing? how can we kind of put a break on things and really just think 'where is this coming from?' linking to [GTCS] standards?" This was also discussed among participants in an unplanned dialogue on the day which led onto talking about how the standards can not only prompt our critical reflection but also help to shape it, as part of the 'whole'. Researchers can use the tools that critical posthumanism provides to frame studies that search for potential teacher growth and development through this critical reflection,

> teachers can develop a more nuanced and relational subjectivity and begin to see themselves not as autonomous actors, but as constituent elements of a multiplicity that, together, produces teaching.
>
> (Strom & Martin, 2022, p. 9)

x. Inclusive education research

Embracing this ethico-onto-epistemology for postqualitative research into the authentic play preferences of autistic children might offer teachers in Scotland such new possibilities for their inclusion in play pedagogies. A posthuman approach does not presume any particular meaning of inclusion as it is

> a dynamic, open-ended arrangement of people, practices and ideas that are weighted, distributed and activated with uneven intensities across a system at any given point in time.
>
> (Naraian & Gabel, 2023, p. 183)

Posthumanism allows, and even encourages, the reconceptualisation of our place in the world alongside our reconceptualisation of research methodology (Ulmer, 2017). So, there may be no better chance to move from a cause-and-effect idea of inclusion to one of "entanglement, interconnection and flow" by starting to "ask different questions, feel different things, and think different thoughts" (Ulmer, 2017, p. 16).From the beginning of our research we must be open to ideas of non-hierarchical rhizomes instead of 'top-down' or 'bottom-up' systems, particularly when considering the research of inclusive practices in schools, according to Naraian and Gabel (2023). To posthumanists influenced by Barad, by renouncing the human/environment dichotomy, researchers can create an epistemological space that takes account of the unpredictable (or even unwanted) actions of humans, non-humans and systemic actors to the point where they are acknowledged as inter- and intra-acting with each other in

constant flux (Fischer, 2018). For example, inclusion, equality and anti-ableism need not be concepts external to praxis that are only applied when deemed relevant, according to Naraian and Gabel (2023), but we can invite them to enter in amongst it all and begin "tracing the flows and mutations… that can offer new openings for coming to know" (p. 177). Critical posthumanism is an opportunity to use postqualitative approaches often seen as necessarily complex ways of tackling equally as complex problems such as inequalities, systemic failures, and sustainable goals (Sidebottom & Bancroft, in press).

In terms of tackling inequalities and failures that have long existed in autism research, moving forward researchers must begin to appreciate that

> The development, conduct, interpretation and outcomes of autism research are all impacted by the complicated combination of autistic and non-autistic actors on either side of the research exchange.
>
> (Thom-Jones & Lowe, 2024, p. 162)

Whilst recognising that the field of autism research is itself in a state of flux, Thom-Jones and Lowe (2024) implore researchers to aim for a balance between respecting the status quo in terms of academic rigour and creating affirmative autism research though the pursuit of inclusion, accessibility, participation and applicability. The autistic community have largely perceived autism research in academia to be exploitative, ignorant, and invalidating, according to Taylor-Bower, Plaisted-Grant and Archer (2024), and ethical dilemmas indicated by autistic people may have been overlooked in the past. Beyond the researchers themselves, institutions too must re-evaluate systems that fail to be affirmative in nature (such as ethics panels who presume that all autistic participants are vulnerable or mentally ill) due to the dominant discourses of autism

research that feed into ableist and biased views (Thom-Jones & Lowe, 2024). It appears shrewd too, perhaps, to consider the autistic experience by demonstrating the non-autistic experience in order to highlight potential limitations of the majority 'neurotypical perception' and impact it has on the lives of autistic people (Naraian & Gabel, 2023). In this research, the connections made between the 'neurotypical perceptions' and autistic lived experiences concern more than just play preferences through the professional learning programme developed for teachers as part of the study. Based on the evidence presented in the literature review, both the dominant 'neurotypical' discourses and the experiences of the autistic community are presented to participants who are working with autistic pupils in a play pedagogy in Scotland. Although the qualitative feedback sought in the study is not from autistic people themselves, it serves a purpose in laying the groundwork for troubling the neurotypical perceptions of the autistic experience. The teacher participants are invited to critically reflect on whether dominant discourses and the status quo of Scottish education might be limiting in terms of inclusion for the autistic pupils in the class. When an event is recounted from a neurotypical perspective it is patently detached from the autistic experience, according to Naraian and Gabel (2023). Throughout an extended process of learning more about autistic perspectives, experiences and preferences, and critically questioning experiences-in-the-making within their classroom, teachers participating in the study can contribute data in their reflections and interview responses.

4. The Play Research App

i. Overview of the research process

The process of this research has taken place almost exclusively within a purpose-built mobile app, and otherwise has been completed with the support of everyday technology. With the exception of recruitment (which was done on social media) and in-person interviews, the Play Research App has been at the heart of the study throughout. All bar one participant had firsthand experience of using the app in some capacity. All participants were GTCS registered teachers, of which there are more than 80,000 potential teachers from which to recruit (GTCS, online), though the predicted number of participants was unknown due to the nature of snowball sampling (and variable due to the split criteria for various aspects of the app). All 80,000+ teachers were eligible for the survey part of the research, with far fewer teachers being eligible to participate in the professional learning programme and subsequent elements of the research. The Scottish Government (online) suggest that around 53,000 teachers were practicing in local authority schools in 2024, and approximately 30,000 pupils in Scottish schools are recognised as being autistic (Scottish Government, 2024). Due to the graduate/professional nature of the eligibility criteria, all participants were presumed to be over 21 years old at the time, and under 75 years old, as per existing professional norms for teachers in Scotland. There are 32 local authorities across Scotland and, in order to collect as nationally representative a sample as possible, rather than local convenience, recruitment was carried out online through widely used social media platforms, with the sample being a non-probability volunteer sample. Because of the use of social media to recruit participants, it had been expected that the snowball

sampling effect – where one group of potential participants will identify others, who in turn identify others – would take place (Cohen, Manion & Morrison, 2018). The advert (or 'post') would be 'shared', 'quoted' and 'retweeted' to other potentially interested parties, including private social media groups specifically for teachers in Scotland, with personal social media 'tagging' and so on. Non-representative volunteers were removed at the first stage of the survey with a simple question registered teacher status and, after the survey, the professional learning programme eligibility. Although measurement of response rates is unlikely to be possible due to unlimited 'sharing' potential on social media, this approach to participant recruitment is likely to yield valid, reliable data, according to Hewson et al. (2016).

In responding to the recruitment posts, participants were signposted directly via QR code or URL to the webpage where they accessed information about the process as well as a link to download the app from their preferred app store. Once the app was downloaded, upon opening the app on their device they were prompted to sign up to the app using authentication from Supabase (an open-source online platform for developers that manages the 'backend' database, authentication and file storage). Immediately prior to signing up they were able to read the participant information sheet on screen within the app, and once they had signed the consent box their login details were taken and logged against the consent form for future access to the app. If at any time their consent was removed, their authentication was revoked and access to the app blocked until they re-consented. This was to prevent anyone using the app without declaring their consent. Everyone who signed up for the app was automatically assigned a secret ID by Supabase, so from the very first login their information is

completely anonymised and all the data that they provide is confidential. A sequential exploration of the app can provide a better understanding of how the features of the app relate to the research itself, and a more detailed look into the how, why, and what for of the app can explain clearly how the research process has been undertaken within the assemblage of this study.

ii. The Play Research App: A brief tour

When the home screen of the app is opened for the first time, the only button available (other than a smaller set of non-research 'functional' buttons with a 'reset my password' function, and check Secret ID/delete my data function, described below) is the icon for the video survey. Any users engaging with the app who have declared that they meet the criteria within the participant information sheet can automatically complete the video survey by clicking on the video icon. The survey contains 82 short clips of children at play. Each clip is a few seconds long and each screen has a five-point Likert scale ranging from strongly disagree to strongly agree based on the statement "I would welcome this type of play in my class". Responses were provided by moving the slider along the scale, with text indicators showing the response options as it slides along the scale. Each response has an integer (1 to 5) which is automatically registered, alongside the participant's Secret ID and the video keyword identifier, in the corresponding table on Supabase.

Once all the videos had been viewed and all the responses had been given participants were led to the next stage response page, where the criteria for the professional learning programme were detailed. The criteria for accessing the professional learning

programme were that they had at least one autistic child in their class. If they did not meet these criteria they were asked to exit the app via a feedback screen where there was the opportunity to choose up to five stars for rating the app and a line for text comments regarding their experiences with the app. Once they had submitted that feedback (or opted out), they exited the app, logging them out and the app could be deleted from their device if they choose. If they chose not to delete the app they could still log back on, but they were prevented from proceeding further than that one 'next stage response' screen. The entire app is contingent on meeting the appropriate criteria for that aspect of the research, and therefore it could not be used by anyone who did not declare their eligibility. If the participants did meet the criteria for the professional learning programme, they had two options. The first option is that they could choose not to take part, exit at this point and have no further involvement with the research. Alternatively, they could choose to participate in the professional learning programme. If they chose to exit the app the same thing happened as did for others who did not meet the criteria – diverting them to a feedback screen with the five-star rating and the text comment, then exit the app. If they chose to move on to the professional learning programme, once they clicked confirm, the first professional learning module was released and the icon button for the professional learning zone automatically became available on the home screen of the app.

Each of the professional learning modules is contingent on the previous module being completed, and only one module is released at a time. The professional learning zone has five module buttons, and only the first button is available to begin with, the rest are 'hidden'. Each module has one training page which contains either one or two training

videos, depending on the module content. After a participant watched the video(s), they moved onto the quiz screen which asks a question relevant to the videos that they have just watched. The multiple-choice responses had to be correct for the participants to move onto the next section. This was for the purposes of contingency rather than for the purposes of assessment – to make sure that the participants have watched and understood the videos to be able to move on to the next module. Once the quiz question was answered, there was a comment section for brief critical reflection where participants were encouraged to use Sharatt's "5 critical questions" based on the content of each module. Once critical reflection responses were confirmed, participants returned to the professional learning zone, where the next module automatically activated and they repeated the process until all the modules were finished. The professional learning programme did not need to be completed all in one go – if a participant left the app at any point their progress was saved and all they had to do was log back in and start back where they left off. Once all the modules had culminated, participants were informed that the programme was complete and that they could move onto the next aspect of the research. They were also provided with further information about the private webpage that provides signposting to recommended resources, as well as a handful of downloadable documents relating to the professional learning module content that could help further their learning in this area.

The third and final button to be released on the home screen of the app is the diary section. Participants were invited to upload an image of a critically reflective diary entry into their diary uploads, which gets stored in a unique folder for every Secret ID on

Supabase. The diaries could be, for example, screenshots of work done on their devices or photographs taken of written evaluations, uploaded as image files onto Supabase storage buckets. Participants were encouraged to do this at least once a week but there was no limit on how many times this can be done over the course of a week, just a suggestion of once a week. At the end of the professional learning programme (4 weeks, approximately, contingent on 4 image uploads), participants were thanked for their time via app notification and invited to participate in a semi-structured interview. Appointments for this could be booked via the research website, on a hidden page only accessible with the link provided to eligible participants. It was up to the participants at that point whether or not to personally identify themselves during the interview process, but it was recommended to them that they signed on using their secret ID to remain anonymous, which was accessible to every app user by clicking on the dedicated ID button on the app's home screen. This was used not only for the purposes of the semi-structured interview but also for data protection compliance. If a participant had requested their information, or any other GDPR procedures during the research process, the secret ID would have been required in order for their data to be accessed. A straightforward 'copy my secret ID' touchscreen function enabled users to paste their ID into other applications (such as the interview registration form online) or to keep it in a safe place for later use. Each of these stages was subject to university ethics approval and stringently evaluated by platform development reviews by Apple and Android prior to being released for recruitment.

iii. Ethical approval and developer reviews

A genuine ethical stance within posthumanism acknowledges that the outcome of any research only applies to the assemblages that existed within that context and should be argued as a process of becoming, rather than an end product. As such, the data from this research was considered solely within the context in which it was carried out. This was something I had to be mindful of throughout the research process, including applying for ethical approval and platform developer reviews through Apple and Android. That being said, should a similar research assemblage come into being, each stage of the research process has been made to be replicable and repeatable to the extent of the tools available to another researcher or app developer interested in doing so.

Whilst the methods used in this research are largely qualitative, such as critical reflection, diary entries, and semi-structured interviews, the research could be considered by some as 'mixed' due to the inclusion of a Likert scale survey. There is no anticipation of any 'typical' positivist element to quantitative elements of the study, and the ethico-onto-epistemology of the overall research does not endorse such approaches. This study brings together multiple methods of crystallisation other than that which is traditionally considered data in the positivist sense. The qualitative data potentially offers an in-depth 'feel' for how the professional learning programme was received by the participants as well as exploring the programme's impact, with the video survey potentially offering insights into the dominant discourses that form the basis of the intended 'disruption' through the module content. All of the data garnered in this study has been confidential and anonymised through the use of automatically

generated secret IDs, held securely on Supabase until it was transferred to the university OneDrive. The only time that identifying information would have potentially been revealed at any point in the study, from the consent stage onwards, was if a participant chose to reveal this for the interview. All interview participants however got to choose a pseudonym in the end, following a change of format from online to in-person.

iv. Background to the Play Research App

This research process has by no means been straightforward or conventional, as indicated in the previous chapter. What originated as seemingly disparate phases of research, based entirely online as a result of Covid-19 when I first started my doctoral journey, became a potentially revolutionary mobile app, taking applied autism research to new heights through mobile technology entangled with posthuman ethico-onto-epistemology. Technology can be complex and present controversy, according to Delanoy (2021), but new technologies can be introduced into this perspective and with careful use of technological innovation we can still be mindful of its political, economic and ecological challenges through a critical lens of posthumanism. With increasingly complex digital and technological tools, researchers may often be tempted to claim true innovation in their methods, when their ground-breaking approach may simply be a different way of doing what has been done for years (Vettini & Bartlett, 2022). However, with little else in the way of efficiently carrying out both the quantitative and qualitative elements of my research in a post-pandemic world, the development of this novel mobile research app may indeed be perceived as a ground-breaking approach to overcoming the challenges specific to this research. How to go about developing this

technology, however, became a dilemma of practicality, usability, feasibility and community. The mobile research app is multifaceted, including a video-as-question survey exploring teacher views of 'welcome' play, a teacher professional learning programme, teacher reflection diaries and each stage is contingent on the completion of the former, by design. As a novice app developer this was both challenging and rewarding but ultimately the brainchild that came from a draft design that seemed impossible, became possible.

A key aspect of finding the right technology to carry out the research was the survey which had to contain videos-as-questions displaying various demonstrations of children at play to audit teachers' perceptions. The in-app survey contains video clips with the statement "I would welcome this type of play from the pupils in my class" and a 5-option sliding Likert scale from Strongly Agree to Strongly Disagree. Although early versions had been drafted using online survey tools such as Qualtrics and QuestionPro, literature on mobile research guided me towards the potential of mobile apps. Any app design that I considered had to take into consideration the embedding of high-quality videos, avoiding lag and technical issues, as well as being user-friendly and compatible with all devices, which became the basis for the first draft app. It all started with a quest for easy-to-learn coding libraries that would allow me to implement this key quantitative aspect of the research successfully, without sacrificing the all-important qualitative elements for the study. All roads led to KivyMD – a collection of material design 'widgets' that can be used across platforms (such as Android and Apple devices) and create easy-to-use, touch-enabled graphical applications (https://kivymd.readthedocs.io/en/latest/).

v. Designing a mobile app for applied autism research

Ultimately, when planning the path for my doctoral research, I had to make a number of decisions around the technology used to achieve the specific aims of the research, and how to best answer the research questions through online means in the wake of the Covid-19 pandemic. What initially started as a somewhat primitive survey with questions of attitude, through time and reflection became video questions with binary responses, then a 5-point Likert scale of welcomeness. The complexity of this became too much for online survey tools with inadequate response types and data hosting limitations, with the additional challenge of this part only being one aspect of a multifaceted study. This could have been problematic not only in terms of segregated data collection and storage but also in recruitment and retention of participants and feasibility for busy teachers. A case became clear for the use of a mobile research app that integrated the multiple methods and made innovative use of the technology already available to researchers and participants alike. Among countless reasons for their popularity, mobile devices (including mobile phones, smartphones and tablets) are widespread due to their easy portability (Pinter et al., 2015). By the mid-2010s, smart device usage in the UK had climbed to over 80% of the population (Garcia et al., 2016). People have since used smart devices throughout their everyday lives for emailing, reading newspapers, shopping, internet searches, social networking, participating in forums, and general communication, among myriad other applications (Sarker, 2018; Pinter et al., 2015). Smart device use can not only be applied purposefully in research, but it can actually enhance it, and many potential features are relatively unexplored (Garcia et al., 2016). Furthermore, there has been a notable decline in the

use of desktop computers and laptops in favour of smart devices over the last decade (Sarker, 2018). Research participants may have a preference for the familiarity of their mobile device over a desktop computer or laptop and they require no extra equipment to participate (Garcia et al., 2016; Pinter et al., 2015).

Though many apps exist for research purposes as well as teaching and learning, reflecting and journalling, and numerous other valuable tools in education, when it came to combining the aspects of this research, no such app existed. Since Frąckowiak, Rogowski and Sommer (2022) highlight that being faced with such specific challenges can potentially only be overcome by developing one's own mobile research app, this was exactly what I set out to do, and the design brief (Appendix A) outlined how I intended to overcome the obstacles by creating a novel mixed methods mobile research app for Applied Autism Research.

vi. Mobile apps for quantitative video-as-question survey methods

Visual images, both still (photographs) and moving (videos), have become an integral part of everyday life and in research – often being used in *either* a qualitative or quantitative way (Rohani, Aung & Rohani, 2014). They are often used as a way to relay or elicit information in research, according to Rohani et al., (2014), but despite having wide-ranging applications, most types of visual research are poorly reported – particularly the types that offer an interpretive perspective rather than capturing behaviours. Visual materials such as photos and videos do not have to be supplementary additions to the research questions, they can actually be the object of the questions (Petersen, 2008). Despite most often being used in interviews to elicit

qualitative feedback, they can also be used effectively in quantitative research such as surveys. Rohani et al. (2014), however, reported none of the 113 studies they reviewed used photos or videos as survey questions during the actual survey itself, although some used them as a preparatory stimulus or as an add-on to the survey questions. Using images in surveys allows participants to rate or respond to the visual material in a way that would otherwise be too difficult to express (for example how much they agree or disagree with something presented in the image). Using an image of a situation can immediately help a respondent picture that situation and decide how they interpret it, according to Petersen (2008), and using visual-based methods in online surveys is a promising technique. Online surveys can offer the opportunity to physically embed moving images within the survey questions, which was never an option with video use in the past (Mendelson, Gibson & Romano-Bergstrom, 2017). For research in earlier decades of the digital revolution, often costs and complications of using moving images were too great to consider practical, having to watch videos separately to the survey itself, or having to conduct the research in labs rather than from home (Petersen, 2008). Mendelson et al. (2017) suggest that favouring a 'video-based question' format has the advantage of prompting accurate responses in real time as they watch the videos, and it may be worthwhile for researchers to consider making their video survey accessible through mobile devices. The issues faced using online survey tools, such as limited content upload, difficulties embedding videos-as-questions, limited capability of responses, as well as potential playback issues for browser-based-formats, led me to the conclusion that a specifically-designed mobile version of this technology was an appropriate response to these obstacles.

vii. Mobile apps for qualitative research using diary methods

The video-based survey aside, another challenging element of the need for technology centred around the concept of online diary uploads for participants' reflections. Literature on using smart devices to gather qualitative data is still in its infancy, according to Garcia et al., (2016), despite being capable of (and ultimately designed for) video capture, audio capture, text and the ability to communicate information in an instant. Until the last decade or so, very little mention of technology was written in qualitative research handbooks, beyond the use of audio recorders and data analysis software (Paulus, Jackson & Davidson, 2017), but there is a growing recognition in academic fields that the possibilities are essentially limitless. For example:

> Mobile, on-the-go technologies such as tablets and smartphones… image and audio editing software are just a few of the technological tools available to qualitative inquirers intent on innovating their practices to include other than word-only methods and forms.
>
> Kaufman and Holbrook, 2016, in Paulus, Jackson and Davidson, 2017, p. 754

Innovation comes in many forms but does not always require reinventing the wheel, and technologies (as well as methods) can be tailored from existing applications and inspired by tried-and-tested approaches (Garcia et al., 2016).

Research that involves participants keeping a record of their feelings, thoughts, actions and behaviours, also known as the diary method, has been used in qualitative research in numerous ways for over a century, according to Vettini and Bartlett (2022). According to Arndt and Rose (2022), reflective journal-type diary studies are useful to engage with the real-world of education research and practice, and diaries can be a gateway to "domains of knowledge that are difficult to access via other research measures, such

as observations and one-off surveys" (p. 1). Using a specifically designed smart device app for the uploading, storing and remote collection of diary entries has a number of benefits over pen-and-paper and other manual methods, such as the ability to use automatic mobile text reminders to complete the diary tasks (Lev-On & Lowenstein-Barkai, 2019). Potential issues that Lev-On and Lowenstein-Barkai (2019) suggest such as the (in)ability to download and install an app, and the potential of coming across a 'technologically illiterate' participant, were in effect cancelled out by the mandated digital literacy for teachers as they were suddenly transferred to online practice during the Covid-19 pandemic (Kennedy, 2022). A number of diary-enabled apps already exist and are readily used by teachers for reflection at various stages in their careers, such as Metapholio (Petko, Schmid, Muller and Hielscher, 2019; Michos, Cantieni, Schmid & Muller, 2021); PebblePocket (Roberts & Kirk, 2019); and the Moodle Mobile App (Allela, Ogange, Junaid & Charles, 2020), therefore technically there is no need to completely reinvent the wheel. However, apps that provide elements in isolation still failed to meet the multifaceted demands of this particular study.

viii. Developing a mobile research app

Developing a new mobile research app should take advantage of common/core features of smart devices, without attempting to recreate complex programming that may otherwise be better implemented by using non-mobile software, according to Patton, Van Woensel, Seneviratne, Loseto, Scioscia and Kagal (2021). Asking too much of a research app may not only result in user difficulty and logistical barriers, but it could potentially result in high development costs which researchers with limited (or no) funding may need to avoid (Patton et al., 2021). There are a number of potential avenues

to explore to create a new mobile research app, but Hadfield-Hill and Zara (2018) highlight that working with an app development company may limit the app's capabilities and the initial brief due to the associated costs potentially being too high to meet initial expectations of what the app should be, and compromises may need to be made as a result. Finding a company who share your vision for the research and how the app will work in practice, in order for this to be translated into the app's architecture, is hard to come by. Frąckowiak, Rogowski and Sommer (2022) suggest that rather than outsourcing the role of app developer to a faceless company, researchers could invite a developer on board who can be considered part of the research team and have them engage fully in the process throughout. However, costs of working with such a company or an individual are still going to be far higher than if the researcher was able to take on the challenge themselves. After surprising myself with the realisation that I seemingly had an ability to learn Python coding relatively easily, this is exactly what I ended up doing.

ix. The app development process

This realisation revolutionised the study plan, and I recognised the potential for this app to be groundbreaking within education research (and potentially in practice) once it was finished, and so I began to engage in self-directed learning. This, according to Morris (2019), is where the learner takes responsibility for meeting their own learning goals and navigating the demands of meeting learning objectives within their own context. Having never done any coding before, I went on an introductory course to learn the basics of the coding language Python. After learning the bare minimum from this taster course, I taught myself to use Python with Kivy on the platform PyCharm and gave myself a crash

course in mobile app development through following various YouTube tutorials. I created the bare bones of the app, with a landing page, a disclaimer button, a sample question and a Likert scale. This was a crude, unfinished and extremely basic version of the design brief that was imagined, but it was the start of bringing this little brainchild into the real world. The requirements of the app were beyond my own capabilities and resources at the time, and increasing roadblocks eventually ground the initial burst of progress to a halt. Neuhaus (2019) suggests that learning how to do something new necessitates failure at it first, because fully understanding how to do it involves learning from the struggle, including setbacks and failures, which certainly rang true in this case.

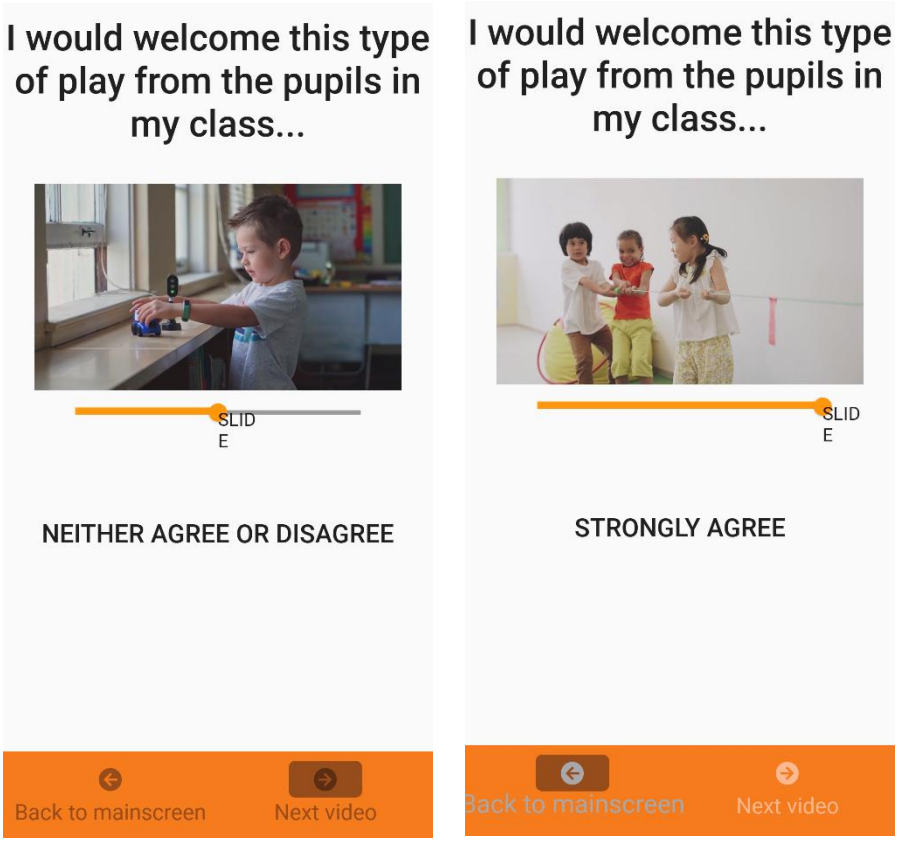
I began to contemplate the wider world of coding and how to follow through with the design brief in the absence of funding to hire experienced developers to do this. In contrast with teacher-directed learning, underlined by behaviourist theory, self-directed learning gives the individual control over the means and objectives of the learning considering their own contexts and finding purposeful, suitable solutions to their individual life problems (Morris, 2019). This includes finding people as resources, though in a post-pandemic society this was still considered a scarcity as social distancing remained in place long after the initial lockdowns of Covid-19. Like most solutions of the time, online human resources became the best-case scenario for responding to the issue at hand. Morris (2019) highlights that adults may often use self-directed learning to find solutions to real-world problems, and teachers in particular may feel comfortable using the internet for these purposes. As a teacher by profession, I was already well-versed in seeking out professional learning opportunities relevant to the skillset or knowledge lacking in any given set of circumstances and this was often

through large organisations and education institutions. In Scotland, experienced teachers are expected to take responsibility for doing, and acting on, their own learning in a way that applies to their own context (GTCS, 2021), and to "identify, plan and develop their own professional learning needs… as they progress through their careers" (p. 6). As a result, all teachers essentially become progressively more autonomous, self-directed, with more individualised learning outcomes, based on their own changing contexts. This includes wider societal contexts, such as lockdown in recent years. The Covid-19 pandemic brought digital resources and the use of online modes of learning to the forefront of education, including solutions for teacher professional learning in the absence of face-to-face opportunities (OECD, 2020). However, in this new scenario as a novice doctoral student on limited funds and with a niche set of requirements to get the job done, I turned to a fellow PhD student for peer tutoring. Emelie was an established coding tutor specialising in Python, and responded to the call-to-arms with hearty aplomb.

Over the subsequent two years, often on a weekly or bi-weekly basis, we engaged in various problem solving, practice-based (and on occasion, trial-and-error) online peer tutoring sessions where the building blocks for the app came together with ever-increasing complexity and resolve. Eventually, when the app met the design brief, ethical requirements, and platform-based criteria for successful distribution, recruitment began and the 'Play Research App' was launched on the App Store and Google Play Store for both Apple and Android devices.

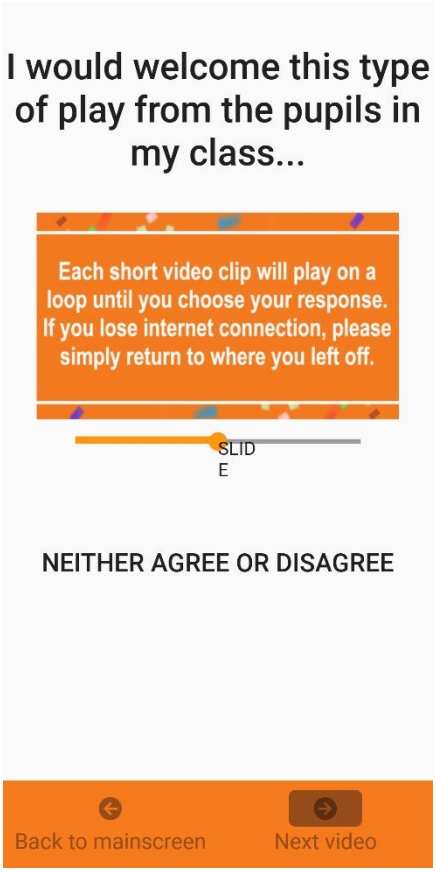
x. The play video survey

The teacher version of the app contains 82 video provocations of children at play with the statement "I would welcome this type of play from the pupils in my class" and a 5-option siding Likert scale from Strongly Disagree to Strongly Agree. All 82 video clips can be viewed within the results, which are found on the results section of the website, but a snapshot of the screen viewed by participants can be found below:



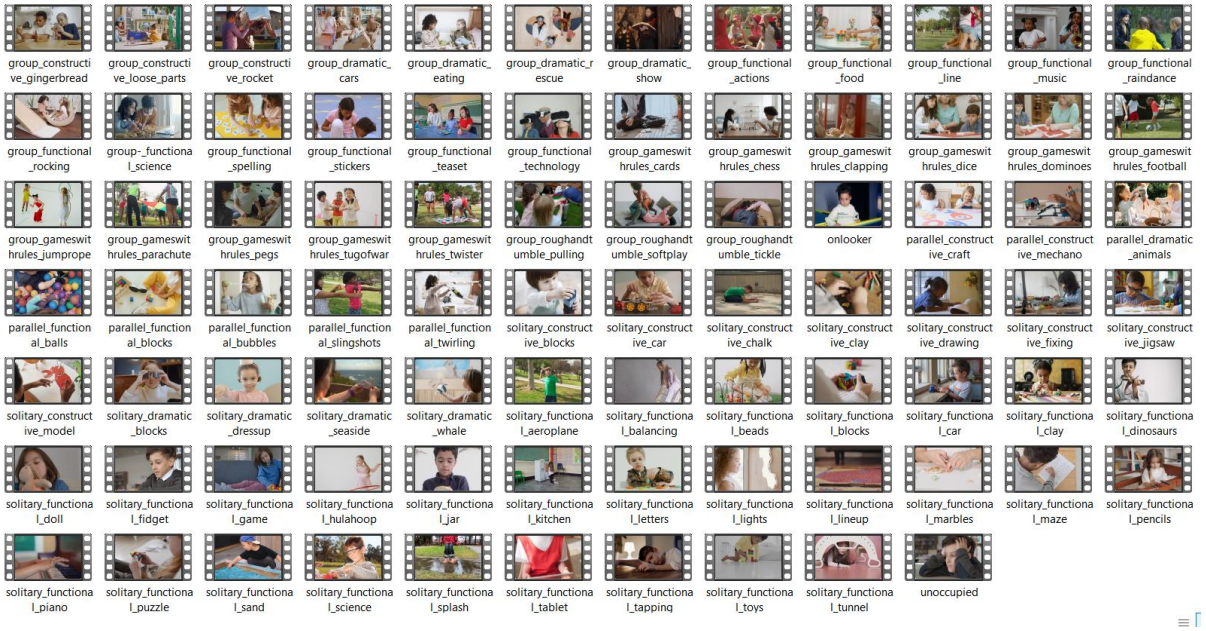
[IMAGES 2/3: EXAMPLES OF VIDEO PROVOCATION SCREEN WITH LIKERT SLIDER]

Participants can rate each video clip by pressing on a mobile touchscreen device with ease. The video clips play on a loop until the response is submitted, and responses are saved immediately if the participants wish to stop, take a break, lose internet connection, or decide to come back to it later.

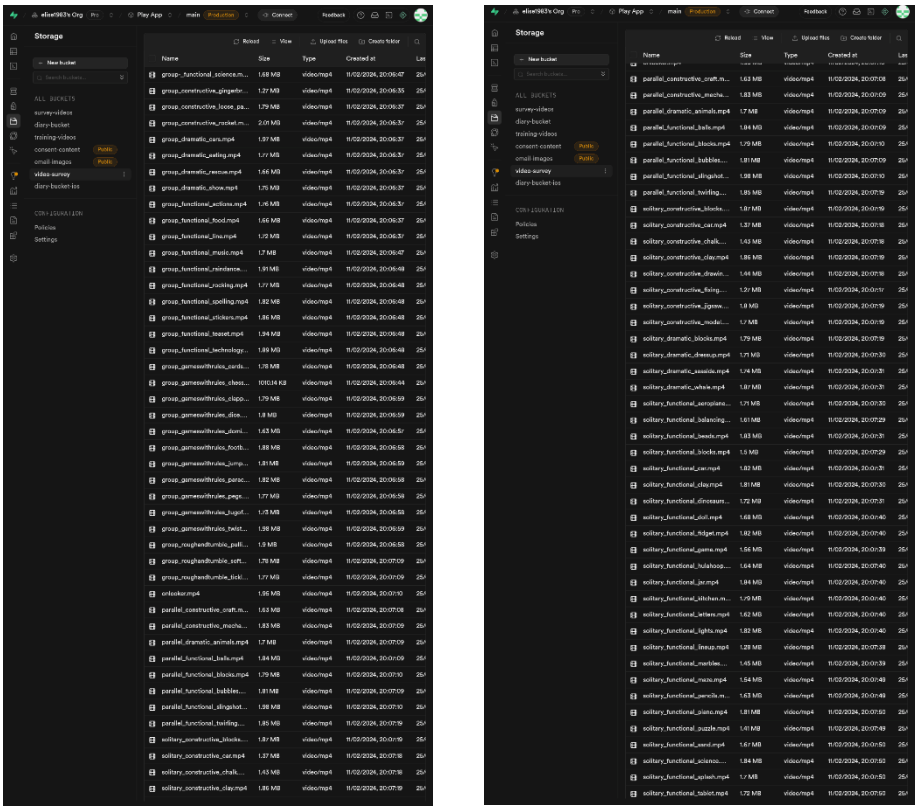


[IMAGE 4: LOADING/PLACEHOLDER IMAGE WITH INSTRUCTIONS]

Each video clip has a unique keyword title and responses are coded to provide an integer based on how welcome that specific type of play is for the participant.



[IMAGE 5: THUMBNAIL IMAGES FOR 82 VIDEO CLIPS]



[IMAGES 6/7: ALPHABETICAL LIST OF NAMES FOR 82 VIDEO CLIPS AS STORED]

The types of play and the categorisations are explained below.

xi. Ages and stages of play

According to Whiteman, De Gioia and Mevawalla (2012), childhood (and play, by default) has been characterised by most throughout the twentieth century as sequential, with abstract concepts of maturity and rigid stages of development. Ages and stages of normative development and developmentally appropriate behaviour became the ultimate definition of childhood, along with the expectation that each child would be endowed by nature with pre-determined means of progressing towards adulthood along a developmental pathway. Furthermore, any child who deviated from this pathway, did not comply with ages-and-stages-appropriate activities, or demonstrated personal agency instead of being conditioned into achieving pre-

determined standards, were purposefully 'normalised' through behaviourist approaches to teaching and assessment, reinforcing universal 'truths' about childhood and play (Whiteman, De Gioia & Mevawalla, 2012). These notions of ages-and-stages-appropriate activities and normative development have become so embedded in education and childcare that any ideas outside of this paradigm may seem alien to some. As such, this study seeks to measure the current perceptions of primary teachers in Scotland, regarding their notions of play, and whether or not the dominant discourse of ages-and-stages-appropriate activities and normative development prevail. By way of context, autistic play preferences may not match teachers' expected preferences (Verschuur et al., 2011) and autistic pupils may have far more positive outcomes if play preferences are identified accurately, and authentic autistic play preferences are allowed (Doody & Mertz, 2013). Whilst autistic children's play preferences can be superficially altered through behavioural approaches (Leaf et al., 2012), the negative implications of this are far-reaching. By not being able to live their life authentically, an autistic individual's wellbeing may be harmed, according to Spath and Jongsma (2019), and this includes being restricted based on neurotypical assumptions. Poor wellbeing (including low self-esteem and depression) can be the result of submitting to the needs and wants of others – such as autistic individuals being under pressure to conform to neurotypical expectations creating mental health issues – so expectations should be shifted and interventions adapted to reframe the notion that there is a set idea of what autistic children 'ought' to do (Bottema-Beutel et al., 2017).

For this study, whilst the normative expectations of play are explored for the purposes of description and classification of play, they are not intended to be used as stages of maturation, or as a linear pathway of development, as will be demonstrated.

xii. Parten's classification of play

The classic study by Mildred Parten in 1932 determined some now-common categories of young children's participation in social activities and play and noted that social participation was likely to increase with age. Preferences for play in Parten's study were indicated as being

> from 2 to 2 ½ years was solitary play, from 2 ½ to 3 ½ years was parallel play, and from 3 ½ to 4 ½ years was associative play.
>
> (Rubin, Maioni & Hornung, 1976, p. 414)

Despite this well-established measure of early social play preferences, some researchers have sought to extend and update the reliability and replicability of the study, and its results, due to Parten's limited sample and the differences in data found in the years since – for example the greater numbers of 3 and 4 year olds engaging in solitary play and less participation in associative and cooperative play than originally thought (Rubin, Maioni & Hornung, 1976). More recent research than Parten's is suggestive that the lower levels of the 'play hierarchy' are found even later in childhood and are likely to present the most common type of play across childhood, with associative and cooperative play beginning to emerge even later in childhood than even Parten suggested at the time, even if other play types continue to be prevalent. For this reason, based on the data from Parten's (1932, 1933) studies and the somewhat more up-to-date critiques by Rubin, Maioni and Hornung (1976) and Rubin, Watson and Jambor (1978), a slight majority of videos were based on solitary play, to reflect cross-

childhood expectations. The remainder of the videos were made up of parallel play, associative play and cooperative play, which Rubin, Maioni and Hornung indicate are less likely than originally thought to be found earlier on, but tend to emerge later in childhood (although this varied according to social class, as found in their 1976 study). Whilst Parten's original stages of social play hierarchy consisted of six categories, further clarification and reclassification of these has been offered by Rubin, Watson and Jambor (1978):

1. *Unoccupied – watching anything of passing interest; walking around room; playing with body.
2. Solitary – playing alone with materials different from children within speaking distance; no conversation with others.
3. *Onlooker – watching others; perhaps talking to others, but no entry into play situation.
4. Parallel – playing independently with toys similar to those being used by others in close proximity; no attempt to play with others.
5. Associative – playing with other children; no role assignment or organisation of activity.
6. Cooperative – playing in an organised group.

Rubin, Watson and Jambor describe the two asterisked categories as 'behaviours' rather than types of play, and are excluded from the other categories as a result. Parten noted in 1933 that "idly sitting and idly looking were gradually given up for more active pursuits at later stages" (p. 143) but I included one video of each nonetheless out of respect for Parten's original findings and suggestions in the literature that these may be pertinent.

Rubin, Watson and Jambor (1978) also note qualitative difficulties separating associative and cooperative play and thus joined them to create instead a 'group play' category. I therefore combined the associative and cooperative play videos into one 'group play' category as a result. Parten (1933) stated that three quarters of the children in her study spent time playing in groups of two or more, although Rubin, Maioni and Hornung (1976) later found that this was more likely to be closer to 40%. Parten (1933) noted that the likelihood of spending time in groups of five or more increased with age, but evidence of this in children older than the ones present in her study is limited. Rubin, Maioni and Hornung (1976) found that, despite group play being prevalent in pre-schoolers 40% of the time, solitary play was not actually thought to be the least mature type of play in 3 to 4 year olds, nor did it cease to occur after the early years, noting that "children who play by themselves may purposely wish to get away from it all" (p. 418). This means that children return to solitary play by choice, and the categorisations are unlikely to be truly hierarchical. Parallel play, however, is widely considered less mature than group play and less likely to be returned to when other types of play have begun to develop (Rubin et al., 1976), so will have a lower prevalence throughout childhood. Thus, by taking group play at roughly 40% prevalence rate as an approximation, the remaining types of play make up the other 60% of play preferences, regardless of maturity levels, with parallel play having the smallest prevalence.

Play in older children has been a largely neglected area of research, according to Rubin, Maioni and Hornung (1976), so for the purposes of a cross-childhood sample of videos, the early years data has been extrapolated to apply to all of childhood to make a reasonable approximation of proportionate representation of each type of play – it is not

intended to be generalised to other aspects of play research where it may not be an accurate 'benchmark' of play stages, and no such benchmark is expected for this study. This approximation of cross-childhood prevalence based on early years data may be particularly relevant when applied to autistic populations, as "normative benchmarks are likely to be challenged when it comes to play and autism" (Papoudi & Kossyvaki, 2018:16) and it is my personal belief that no such benchmarks should be applied to autistic children and their play, so these classifications should be seen as 'types' or descriptors of play rather than normative expectations of maturity.

xiii. Smilanksy's classification of play

Often used concurrently with Parten's 'stages of play', Sara Smilansky's play classification has been used for decades in a similarly hierarchical fashion, often creating a 'nested hierarchy' of play stages (Takhvar & Smith, 1990). Based originally on Jean Piaget's three main types of play, which were functional/practice play, symbolic/fantasy play, and games with rules, Smilansky's classification had a similarly cognitive focus, as opposed to Parten's social emphasis (Gunal & Tufan, 2019). The four stages of play were described in great detail in Smilansky's original (1968) book, but Rubin, Maioni and Hornung (1976) succinctly defined them in four shortened descriptors of each as follows:

a) Functional play – simple, repetitive muscle movements with or without objects;
b) Constructive play – manipulation of objects to construct or 'create' something;
c) Dramatic play – the substitution of an imaginary situation to satisfy the child's personal wishes and needs; and
d) Games with rules – the acceptance of pre-arranged rules and the adjustment to these rules.

(Rubin, Maioni & Hornung, 1976, p. 414)

The functional play and games with rules categories are akin to the same stages of Piaget's classification, and the dramatic play stage corresponds to Piaget's symbolic play stage (Gunal & Tufan, 2019). However, the constructive play stage was devised as an intermediary stage between functional and dramatic, and

> By calling activities with a constrained end-point (as in drawing, modelling, jigsaws, etc) "constructive" play," she departed from Piaget's analysis in that such activities were not seen by him as fully playful.
>
> (Takhvar & Smith, 1990, p. 117)

Several studies in subsequent years following Smilansky's original work suggested that constructive play is "as mature a behaviour as dramatic play, if not more so" (Takhvar & Smith, 1990, p. 120) and few suggest that dramatic play replaces constructive play in any sort of hierarchical order. Indeed, Parten coincided with this in the 1933 study, noting that constructive play itself showed no clear-cut age trends for frequency, and some constructive play with older children showed more sophisticated use of materials. Furthermore, it appears that (due to its focus on primarily object-based play) Smilansky's classification ignores key types of play, such as rough and tumble – characteristic of play across childhood and beyond in many cultures – leading many researchers to annex a further category to include rough and tumble (Takhvar & Smith, 1990). One final criticism of Smilansky's classification is that the descriptions for both dramatic and constructive play speak to the player's own mind –

> How do we know if a child is trying to satisfy his or her needs or wishes by substituting an imaginary solution, or is trying to create something?
>
> (Takhvar and Smith, 1990, p. 115)

Adults inferring intent on children's play is potentially problematic and may lead to incorrect classification of play – a child's intent may even start out as one category (eg

constructive) and progress onto another (eg dramatic) within the same play session using the same materials (Takhvar & Smith, 1990).

Bearing these issues in mind and remembering that Parten's stages of play may too be less reliable when viewed as hierarchical, the outcome of this has been to reject the use of these classifications as normative judgements of maturity of play and use them instead as purely descriptive tools, as well as supplement with the additional descriptor of rough and tumble.

xiv. Classification of play videos

Consequently, the use of both Parten's and Smilansky's types of play result in the following categories:

A	B
Solitary	Functional
Parallel	Constructive
Group	Dramatic
*Unoccupied	Games with Rules
*Onlooker	Rough and Tumble

TABLE 1: PARTEN AND SMILANSKY'S PLAY CATEGORIES

Videos are categorised as a combination of column A and column B, but not more than one from each column. The behaviours marked with an asterisk feature in one video only each, with no further category from column B, as these are a descriptor of the

rejected types of play and appear only out of respect for Parten's original classification. All of these categories are for illustrative, descriptive purposes, not as a judgement of intent, mind, or maturity in any way. Much like Rubin (1982), the play demonstrated in the videos are categorised using both the cognitive play classifications of Smilansky and the social play classifications of Parten. A further key word for each video assists with describing the video content (eg the use of a particular toy or stimulus), totalling three key descriptive words for each play provocation. Examples of this include "solitary constructive jigsaw" and "group dramatic cars."

As per the data extrapolated from early years studies, approximately 40% of the videos involve group play, around half contain solitary play, and the remaining tenth consist of parallel play activities, as follows:

Type of play	Number of videos	Percentage overall
Solitary	40	50%
Parallel	8	10%
Group	32	40%
*Unoccupied	1	n/a
*Onlooker	1	n/a

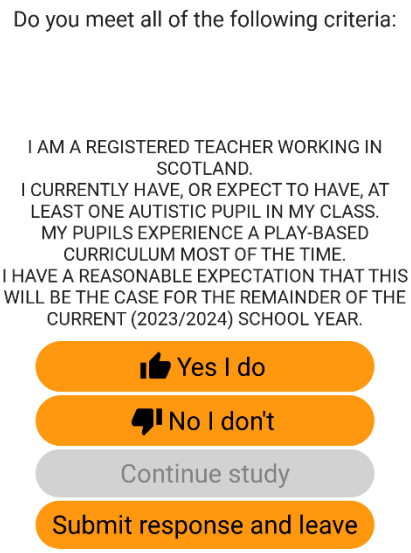
TABLE 2: VIDEO CLIP DISTRIBUTION FOR PLAY CATEGORIES

xv. The Embracing Authentic Autistic Play Series

The professional learning programme for teachers, titled the 'Embracing Authentic Autistic Play' series, contains five in-app modules consisting of seven videos based on the landscape of the literature for this research. A text-only version of this programme can be found in Appendix B. Participants who met the criteria for this had the opportunity to learn about:

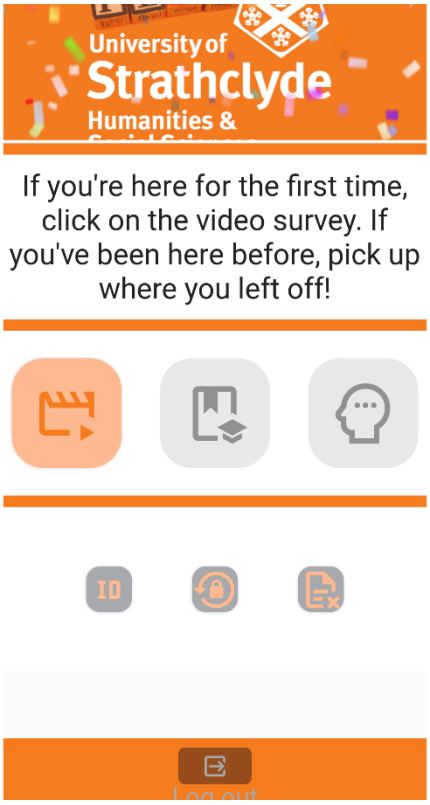
1. The Ages and Stages of Play
2. Play Pedagogy in Scotland
3. Inclusion and Children's Rights in Scotland
4. Children's Capabilities and Inclusive Play in Scotland
5. Embedded Ideas of Autism and Play Interventions
6. Historical Insights into Autistic Play
7. Authentic Autistic Play

The criteria for participating in this programme were (further to already confirming previously that they are a GTCS registered teacher) simply that they currently engaged in a play-based curriculum and that they had at least one autistic child in their class at the time of participation. After finishing the play survey, each participant was asked if they a) meet the criteria for the second part of the app, and b) wish to continue:



[IMAGE 8: END OF SURVEY RESPONSE]

Access to the professional learning programme has contingent coding, and each module in the app is similarly contingent on the successful completion of the one before. This makes the whole app easy to navigate, without overwhelming the participants with too much information at once, and there are no time-outs or deadlines for completion, so participants take it at their own pace. Once the programme was complete, they could revisit any of the modules at any time to refresh their knowledge or return to a specific point in their learning, meaning their learning is self-directed albeit initially steered forward in a step-by-step manner.



[IMAGE 9: CONTINGENCY RELEASE OF APP STAGES ('OPEN' VERSUS 'CLOSED' SECTIONS)]

All they required to do so was a consistent internet connection, as the videos do not get downloaded to the device as their responses are instantaneously uploaded to online data storage. As such, the Embracing Authentic Autistic Play series is essentially a form of Massive Open Online Course (MOOC), although in this context it is more akin to a 'mini-MOOC' as it is not widely available to the general public at this time.

xvi. Self-directed professional learning: MOOCs and mini-MOOCS

According to Buchem, Amenduni, Poce, Michaescu, Andone, Tur and Smitek (2020), MOOCs can shift the focus of learning from content-orientated activities to more independent forms of study and discovery, and can be adapted to this 'mini-MOOC' style taking the form of a smaller, more private online course which integrates short

lecture videos, quizzes and chunk-sized tasks. Mini-MOOCs are designed this way to allow participants to learn in a more flexible, self-directed and gradual way, placing learning in tandem with other everyday activities. Spector (2014) suggests that mini-MOOCs tend to have a more precise focus than other courses – a relatively narrow scope often with the aim of honing a particular knowledge- or skill- set. Despite a marked increase in the use of such courses – especially with the sudden onset of social distancing during the Covid-19 pandemic – little research has been carried out on the benefits, accessibility and practice of online professional learning for teachers (Anderson, Turner & Brown, 2021). Morris (2019) notes some roadblocks to self-directed learning –time restraints, participation costs, and lack of quality resources, to name but a few. The nature of mini-MOOCs with their bite-size chunks of learning, however, may better suit the modern landscape and can direct attention to the specific skills and knowledge required by the individual or their organisation. Low-cost, incentives-based, or funded MOOCs often provide an attractive solution for professional learning opportunities (Andreatos, 2015). MOOCs taking advantage of smart devices, multimedia technologies and visual imagery to engage learners appear to advantage to those with the digital literacy skills to match. Morris (2019), on the other hand, points out that a large portion of MOOC learners fail to complete the course. Indeed, Andreatos (2015) highlights that 'old fashioned' learners might have difficulty with this type of course, though

> familiarity with new technologies and new media is one of the competencies demanded in contemporary and knowledge-intensive workplaces.
>
> (Andreatos, 2015, p. 50)

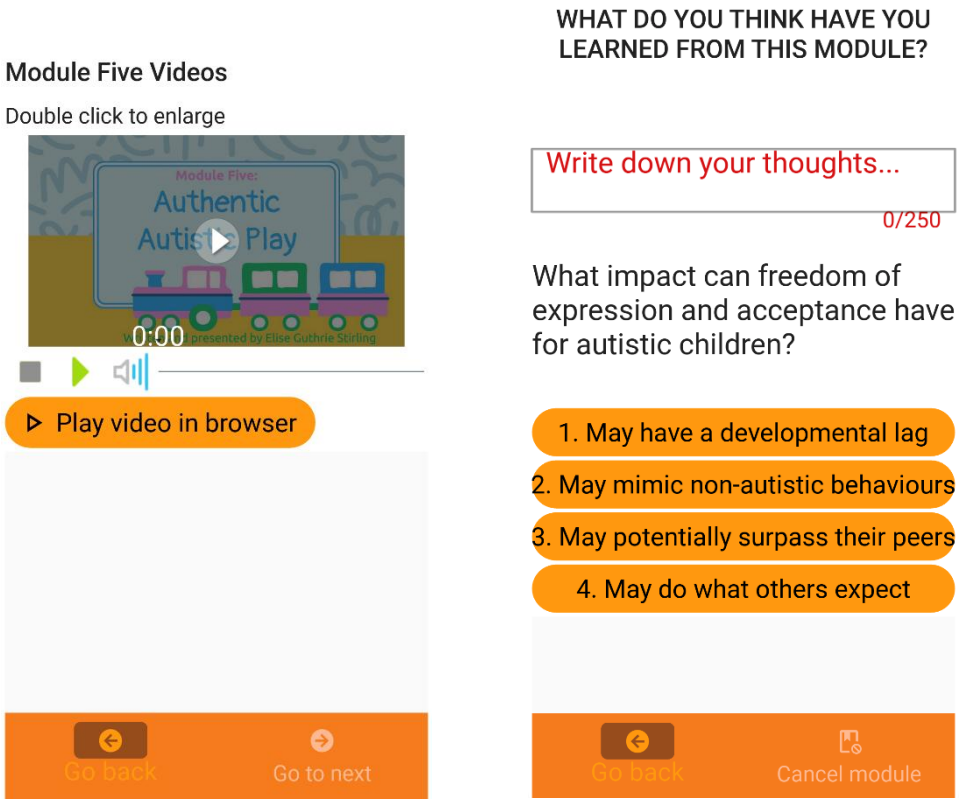
OECD (2020) report that the use of technology has enormous potential for the delivery of professional learning activities for teachers, and teachers have always generally been expected to demonstrate a level of technological know-how even before the pandemic. Qualified teachers in Scotland must have a minimum level of university-level qualifications, and Morris (2019) indicates that the majority of MOOC learners who successfully follow through with courses have this level of higher education at least. The literature on the standard and success of using mini-MOOCs for this purpose is still emerging, and

> evidence on the extent to which [a MOOC] translates into actual change in teacher practices remains scarce and is often based on teacher self-report.
>
> (OECD, 2020, p. 5)

Calderwood (2025) highlights that as educational technology discourse grows there has been a drive towards consider how MOOCs can help individuals break free from traditional approaches without ignoring the inevitable external forces such as commerce that may challenge or disrupt their progress or development. Through researching MOOCs and mini-MOOCS ahead of the Embracing Authentic Autistic Play series, it became apparent that these types of courses appear to have sparked increased interest in self-directed learning online (Morris, 2019). Although self-directed learning is fundamentally pragmatic (and humanistic) in nature, according to Morris, doing this through a posthumanist lens does not require it to be completely new, but it can be different, it can be creative. Self-directed learning through a bespoke mobile app is unlikely to be what Morris had in mind, despite the growing popularity of learning apps such as DuoLingo which have opened up a multitude of opportunities for adult learners (Delanoy, 2021). Though posthumanists have differing extremes in how far they go in

critiquing humanism depending on their beginning standpoint, Delanoy (2021) suggests that we keep hold of humanist concepts such as self-determination, critical (self-) reflection, and growth through education.

For my own research assemblage, I naturally put a great deal of thought into what methods I would be using for the research. I took time to consider the intended impact this professional learning programme would have for the teachers involved, and how I could maximise this within the design, then after reading Darby's (2019) book I knew I wanted to create the mini-MOOC-style programme. Darby suggests that all teachers bring with them a lifelong experience of the classroom – but with online instruction, professionals tend to lack the same rich background. In designing such a programme, one can change usual practice by taking simple steps instead of attempting a full overhaul of 'the done thing'. An example of this could be the pilot study carried out using the Embracing Authentic Autistic Play series as an in-person training format that teachers were likely to be familiar with, in order to effectively explore the efficacy of the programme modules outside of the context of online learning. Darby (2019) highlighted design elements that, at the time of reading, were particularly relevant to writing of the mini-MOOC modules for the professional learning programme, and inspired coding elements for the app that relied on contingency to avoid not only information overload but also the temptation of 'skipping ahead'. Darby notes that online learners often opt-out of tasks that they do not feel accountable for, are not comfortable with, or feel unfamiliar with. I chose to include 'low-stakes assessments' for participants moving through the modules, such as built-in 'conditional release' of content that was written into the app code:



[IMAGES 10/11: EXAMPLE OF MODULE VIDEOS AND LOW-STAKES ASSESSMENT QUIZ]

Critical reflection of personal and professional knowledge, understanding, beliefs and values as well as pedagogical practice is encouraged throughout the programme, and each module prompts further thinking about how the content relates to their own context. Crucial to the development of this programme and in stark contrast to the in-person pilot, for online learning Darby (2019) advocates that online learners are more likely to click on a video than read text. This led to the decision to record each module as video lectures, rather than downloadable PDF files. Each video is around fifteen to twenty minutes long to avoid participants 'tuning out', as suggested by Darby in relation to recommended attention spans for online learners. Having considered the parameters of the research and reviewed the literature thoroughly prior to creating the module content and pedagogical approaches for the professional learning programme, I was able to embrace a 'backwards design' approach. By knowing what the research aims and desired outcomes for were from

the very beginning of the learning and teaching design: the mini-MOOC video style; the presentation content and design; the in-person pilot study; the coding and development of the app; and further moulded by the ethico-onto-epistemology of a critical posthumanist lens, I was able to shape the whole professional learning programme to sit comfortably within the 'big picture' of the research assemblage.

However, one issue that I encountered with Darby's approach was the insistence that success could only be maximised with lecturer/instructor presence, and this simply was not realistic given the nature of the programme – the ethical implications, the purpose of the app, the impact on recruitment and retention of busy teachers – a synchronous researcher-led course was ruled out early in the design. In terms of considering potential ways round this, I found inspiration in Morris' (2019) article on self-directed learning. Aiming for the professional learning programme to be undertaken by a learner taking responsibility for meeting their own learning goals, navigating the demands of meeting learning objectives within their own context, which is exactly what Morris stated self-directed learning for professionals should be. This reassured me that, despite Darby's (2019) insistence that lecturer/instructor presence in online courses is key to success, a professional learning programme using a mini-MOOC approach could be successfully self-directed by teachers in Scotland.

Section three: Entangling the research

5. Diffractive Data Entanglements

i. Putting the 'ethics' into ethico-onto-epistemology

Before delving into 'findings' and 'analysis' of the 'data', as one would expect from a doctoral thesis, I wish to talk here about ethics. Yes, here. I can hear the outcry, "wait a minute, why is the ethics section in the data chapter?! That's not how we are supposed to do it!" but here is why. Although there is often seen to be a dominant thesis structure in education research which can be difficult to bypass the linear shape of qualitative rules and expectations, through an ethico-onto-epistemology that is connected and relational researchers can engage more inventive processes that adapt ways to think, make sense and create flow in doctoral theses (Young, Crinall & Malone, 2022).

As previously indicated, postqualitative, critical posthuman and new feminist/materialist researchers and theorists often envision ethics, ontology and epistemology as entangled as an ethico-onto-epistemology – and thus ethics can never truly exist in isolation to the rest of the research or methodology (Bozalek, 2021). The data in this study is comprised of both qualitative and quantitative 'methods', but not in the traditional 'mixed methods' sense, because of this ethico-onto-epistemology. So, in that vein, the data is not 'analysed' in the traditional sense but instead interpreted and diffracted as entanglements in the research assemblage. Thus, the quantitative and qualitative data, through a postqualitative and critical posthuman lens, go through a process of diffraction, reflection, and critical dialogue in an anti-hierarchical and flat

ontology and ethical meaning-making, throughout this chapter. It explains the 'softer' version of postqualitative research which 'troubles' methods rather than outright rejecting them, and becomes about

> creating languages and vocabularies that establish connections between previously unconnected things and, through this connecting, generates new ways of thinking, seeing and feeling such things.
>
> (Boyd, 2022, p. 2)

Researchers can make an intentional decision to resist fixed traditions in qualitative research to embrace research that is more uncertain, less predictable, and has emergent becoming, according to Kuby (2023). Calling this a 'speculative' approach, Kuby (2023) maintains that this can be conceptualised through "drawing together various philosophers and theorists who might get labelled as post-structural, posthuman, feminist 'new' materialist" and so on, because these are "thinkers who see our knowing, being and doing with/in the world as mutually constitutive" and support a combined ethico-onto-epistemology through these philosophies (Kuby, 2023, p. 134). Serra Undarruga (2023), however, warns against postqualitative concepts that outright discard traditional methods and renders them useless, and suggests avoiding "absolutisms where one theory… is qualified as superior or inferior to the other" (p. 1112). Rather than creating false dichotomies like traditional qualitative approaches versus these disruptive or innovative approaches, Kuby (2023) advocates for finding a way to work simultaneously with the two to find a comfortable balance of structure (often necessary to some extent at least by PhD scholars who are constrained by requirements needed for passing their viva) and space to challenge norms and expectations. Kuby (2023) suggests that this could be thought of as the 'loose but tight' approach, where "students need both space *and* a structured agenda" (p. 138), and

embraces Braidotti's questioning of disciplinary purity without rejecting it altogether, to create new meaning, still within institutional boundaries but in ways that test the waters of resistance to taken-for-granted assumptions. Critical responsivity to the research – the data, the participants, the interpretation, and so on – can successfully emerge from improvisation and inventiveness, a playful approach (Bozalek, 2021). Quite apt in research about play itself. Putting theorists and concepts together that might on the surface seem incompatible and seeing what is produced as a result is diffractive in itself, according to Kuby (2023), and it gives researchers a chance to play with data and theory creatively:

> I am going to play… I gave myself permission… the joy from doing it… And as a teacher [myself], [I'm] thinking, we just have to give our students a place to play and think. It was valuable for us [too].
>
> (Kuby, 2023, p. 138)

Paradigms and methodologies are often thought of as fixed entities, presented in textbooks as neat categories, but within PhD programmes, doctoral scholars could potentially be given space to play with paradigms – the different ways to 'do' and 'be' in research – to create new meaning (Kuby, 2023). Bozalek (2021) queries "what if we were to reconfigure research processes and practices as playing?" (p. 141). Through this approach, we can potentially make "possible futures out of joyful but dangerous presents" and create "new abstractions, new lives" (Haraway, 2015, in Bozalek, 2021, p. 141). In academia, Kuby (2023) posits the idea that it should be a safe space to explore and experiment with the new and different, to be vulnerable, sit with uncertainty and problematise the research. Within institutional boundaries, such as requesting ethical approval from faculty or university committees, the review of this application is often presumed to be a rule-based activity, according to Bozalek (2021). In postqualitative

research that is *becoming*, however, it has yet to be enacted or fully conceptualised, it does not rely on pre-existing conditions, and the outcomes and processes of data analysis cannot be anticipated in advance. Thus, it becomes challenging for researchers to articulate the ethical responsibility, accountability and professionalism that will emerge through their research in advance, but in postqualitative research,

> Rather than existing as principle ethics or quasi-legal moral codes of conduct… ethics emanate from intra-actions, practices or enactments/doing in relationships, not what ethical committees and their codes of conduct are prescribing.
>
> (Bozalek, 2021, p. 140)

This extends to the nonhuman/more-than-human elements of the research assemblage and thus includes the relationship with the data. It also means that "both researcher and respondents may be rendered capable through the research process" (Bozalek, 2021, p. 143). Though indeterminate (dynamic and becoming, not fixed or knowable) in advance, it exists as a capacity to cultivate new meaning ethically.

Within my own institutional boundaries, I made it clear that it was (at the time of my ethics application) indeterminate but that I had a strong ethical stance as both a researcher and a teaching professional, and noted that all participants too would abide by an ethical boundary as registered teacher in Scotland (one of the main inclusion criteria for participants). My ethical approval rested in part on the fact that

> There is an expectation that GTCS registered teachers will abide by the Code of Professionalism and Conduct [CoPaC]… as a baseline for confidentiality and anonymity.
>
> Ethics Application

As a teacher researcher, I have a responsibility to practice my research as equally ethical as I would as a classroom practitioner, and

> As a GTCS registered teacher myself there is an underlying expectation that I will not only act within the professional standards… but that I will adhere to GTCS expectations that any research carried out will be done in a manner that is consistent with SERA and BERA guidelines.
>
> Ethics Application

In a BERA blog article, Kay Sidebottom emphasises that traditional research can fail to recognise the value of entanglements within ethics. Research that derives from a need for certainty and datafication throttles the capacity for new possibilities and new understanding, according to Sidebottom (2019), and Braidotti's 'nomadic' enquiry allows for letting go of these old ways of thinking to make way for new ones, not through resistance necessarily, but openness:

> To be nomadic in this sense also proposes a freeing from the constraining rhythms and linear direction of academic researcher practice… according to the rhythm of the project, rather than the university or evaluator directives and frameworks.
>
> (Sidebottom, 2019, online)

In acknowledging this stance, welcomed by BERA, I was confident in asserting my critical posthuman ethico-onto-epistemology. I noted that

> According to BERA (2019), researchers should be explicit about why their chosen methods, theories and philosophies are effective through a particular position or stance, as difference research approaches have different markers for quality and integrity.
>
> Ethics Application

Different methods of 'triangulation' or rather 'crystallisation' than what is ordinarily expected can be brought together and in this case I initially anticipated that diary uploads, critical reflection, and interviews could offer triangulation. It was indeterminate from the start and I knew that this would not necessarily be 'triangulation' that came about – it was not, evidently, but a different kind of crystallisation manifested through the becoming of the research. However, this initial reassurance was provided to

denote my careful consideration of research integrity. Rather than being a tick-box exercise of ethics quality control or management,

> researchers who interrogate evidence through a posthuman lens might note that ethics should be about developing an awareness of our own position, our biases, privileges, influences and power (Sidebottom, 2020).
>
> Ethics Application

Some things certainly changed in my research process that affected moving forward in regards to my ethics – some required updated approval (such as widening the inclusion criteria for participants) and others did not (such as creating a more social-media friendly portrait recruitment advert) – based on participant recruitment stumbling blocks and responding to feedback from potential participants. Ascroft (2025) notes that "this way of working has enabled me to become more responsive with my methods" and suggests that this "has strengthened the quality of my research" (p. 48). Being response-able (as well as responsible) is perhaps in conflict with, or at the very least holds tension with, the ethical approval process as we know it but

> Ethics then is not about some rules imposed on research or the researcher from an external system but rather… a response-able approach… see[ing] oneself as part of the world and the research process rather than exterior to it.
>
> (Bozalek, 2021, p. 141)

In qualitative research, oftentimes as much as in quantitative research, validity is sought through positivist markers that aim to be predictable, recognisable and calculable despite being invented to counter the more positivist methodologies (Li, 2023). Coding is often seen as the 'go-to' approach to analysing qualitative data, with thematic analysis as a popular methods that qualitative researchers (over)rely on, but these pre-existing, conventional methods can be re-orientated in postqualitative research which "does not aim to replace qualitative research or become a more

advance version of it" but "offers researchers the opportunity to work without pre-defined research methodology, design or procedure" (Li, 2023, p. 17).

ii. Responsibility and Response-ability

Boyd (2022) purports that the most important thing to acknowledge is that postqualitative research is 'anti-method', "against proceduralism, against the stability of 'data' and against anthropocentrism in research" (p. 3) but this does not necessarily mean an absence of method, just against method as most researchers know it. Postqualitative researchers work more speculatively through ontologies primarily rooted in Deleuzian theory, and

> it involves becoming entangled with 'data' but also extends what counts as data… It not only 'plays' with different analytic approaches with other researcher subjectivities… inviting researchers to instead make choices in response to what happens within research encounters.
>
> (Boyd, 2022, p. 3)

Researchers embracing postqualitative concepts would not necessarily benefit from conventional methods of 'data collection' or 'data analysis' as they have previously existed, but can rethink these practices and include their own version of those methods (Li, 2023). In the case of semi-structured interviews such as within this research, it can therefore be suggested that interviewing *the person* no longer applies, as if they are a standalone subject through which research data is collected and analysed, even though the interview is a well known method of 'data collection' in traditional qualitative research (Boyd, 2022). Traditional interviews allow researchers to maintain the 'well-trodden path' of garnering knowledge from subjects, collecting data, coding the data and interpreting the results as evidence (Boyd, 2022). Interviews are, by and large,

opportunities to glean how people perceive their realities in context, and interpret any relevant social phenomena that emerge from this (Pessoa, Harper, Santos & Gracino, 2019). Qualitative research assumes that interviews produce expected and accepted sets of information, treating interviewees as "passive vessels of answers for experiential questions" (Gubrium & Holstein, 2003, in Strauven, 2024, p. 71). Whatever the desired outcomes of the research – whether it be an intervention, a change in policy, or to support a community – under strict boundaries and rules within academia, interviews are relatively limited and

> researchers must recognize these limitations as well as the fact that research strategies provide only a partial view of the phenomenon analyzed.
>
> (Pessoa et al., 2019, p. 7)

Instead, the researcher, the interview participant, the 'data', the whole research assemblage, are all embedded and entangled in/with the interview across time and space – with no (or little) pre-determined trajectory or planned outcomes – in the 'speculative middle' (Boyd, 2022). The suggested approach to this uncertain middle ground between tentatively planning the research and relaying the outcomes to readers, is "to start by *doing* something and see where it takes you" (Boyd, 2022, p. 4). Rather than recording data collection as if reporting on a fixed event, methods should allow for iterative, generative encounters and become about "activating problems and concepts in the midst of an event" and in the case of multiple encounters (such as in this research, with multiple interviews) thinking sparked during and following each event can flow "into the next event where it is 'agitated' again, producing yet more concepts and ideas" (Boyd, 2022, p. 4). Although this might be a step farther than some

researchers may wish to take in reimagining the traditional interview, it means that concerns that interviews have become 'incommensurable' in postqualitative research are quite unfounded and we can avoid throwing the baby out with the bathwater by embracing the value of interviews through putting them to work in a different way (Strauven, 2024). Involving the interviewees more in the research can strengthen the results, validate their perspectives and give deeper meaning to their participation, according to Pessoa et al. (2019). In an ethical postqualitative interview, knowledge can be co-constructed and

> rather than seeking an external, pre-existing truth, this approach emphasises creating conditions that enables interviewees to be more narratively resources to attribute meaning to their experiences.
>
> (Strauven, 2024, p. 74)

Reading back participants' own interview narratives to them supports a more responsive, reliable and expansive interrogation of the topics discussed, with added accountability for the researcher to ensure accuracy and understanding of the responses (Strauven, 2024). In doing so, participants are challenged to engage in (re)thinking about their own words and perhaps reflecting on their meaning and potential. But according to Young, Crinall and Malone (2022), qualitative research such as interviews no longer *requires* reflexivity, because postqualitative research allows researchers to go beyond this:

> This means individuals are not always taking sole responsibility for the production of what emerges on the academic paper page.
>
> (Young et al., 2022, p. 315)

The responsibility, and response-ability, can be shared and blurred between the researcher and the participant, and any other part of the assemblage that can express insight, with 'data analysis' becoming diffractive. According to Young et al. (2022),

diffraction in this sense is about close encounters of actors in the assemblage, rather than a familiar practice of reflecting at a distance (in terms of both distant time and distant space, after the fact in another context). Reflection also unfolds from encountering a challenge that is 'ontologically independent' from the researcher, according to Li (2023), holding it at a metaphorical distance as a mental activity within ourselves. This has been criticised, according to Serra Undurraga (2023), where reflection is often believed to rely too much on "representationalism and its aim to identify and categorise the self" without leaving space for the "processes of becoming and production" (p. 1111). But Serra Unduragga (2023) contends that providing space for becoming and production of the 'new' should not automatically equate to discarding the 'old'. Both reflective practices and diffractive practices can blur into each other, and in all likelihood no one who practices diffractively is doing it without also doing so reflexively – they can overlap and be used simultaneously and without boundaries:

> I do not think that I need to reject reflexivity and become diffractive. I do not think that I need to move away from this search that asks: What is happening? Who am I being in this situation? What do I feel about this? What cultural discourses are operative now? I do not need to stop asking these questions because they also open different avenues; they can be useful in different contexts because of the contexts that they *produce*
>
> (Serra Undurraga, 2023, p. 1114)

Through this kind of reflective practice, understood as ways of relating to oneself and to others in order to make sense of the work, a more relational approach to qualitative research is found. Reflexivity in research is not a particular method, nor attached to a particular method, but is shaped by context, according to May and Perry (2018), and it allows a depth of awareness around data connectivity, and an openness to discomfort that might exist through becoming critical around information and practice. Although Li

(2023) positions the diffractive entanglements "between theory an data, researchers and the researched" (p. 18) as an alternative to reflection so as not to simply "mirror something that is pre-existing from a distance" (p. 19), teachers in Scotland are encouraged by the GTCS standards to become reflective practitioners (GTCS, 2021). Often, models of reflection for teachers can be positioned as

> a means to a desired end… suggesting reflection should result in some required change, rather than reflection as either the disentangling of a puzzling thought, an opportunity to ponder a question
>
> (Oates & Mynott, 2025, p. 5)

Reflection can, however, become 'more-than-human centred reflection' to avoid the superficial and performative rhetoric, that enables authenticity through ontology, according to Oates and Mynott (2025), and re-organising these known models of teacher reflection to create a more entangled and connected approach. Importantly, speaking candidly about what is and is not within one's own power to influence, how to connect with the wider issues and resources of education, and taking note of 'what matters' can lend a more authentic approach to reflective practice (Oates & Mynott, 2025). While traditional data collection methods like interviews have been criticised by postqualitative scholars (Li, 2023), making the interview itself – and the 'analysis' that emerges – more connected and relational through both reflection *and* diffraction, it can be a more ethical, authentic and generative research method that broadens the scope for thinking (Serra Undurraga, 2023).

iii. The becoming of the 'data' - what kind of interview do you call this?!

In taking forward a simultaneously reflective/reflexive (both critically reflecting on past events and more dynamically examining the current and future possibilities of the

research) and diffractive/relational approach to the interviews for this study, the postqualitative gathering of 'data' (so indicated because, as discussed, the content of the interview discussions is not an isolated entity but part of a wider assemblage, and the 'data' comes from more than just words and information) has been laid forth in the following section to illustrate the emerging becoming of the research through the interviews and their entanglements. Though multiple (in a sense, mixed) types of 'data' have been 'collected', their intra-action and interrogation throughout this chapter will emerge in a non-linear and anti-hierarchical manner before their 'analysis' unfolds in the final section. As previously indicated, the app collected responses to a Likert scale of what teachers in Scotland deemed 'welcome' play in their classes. Following the survey with video-based-provocations, respondents were asked if they would benefit from a professional learning programme on authentic autistic play, and if so, participation involved five in-app learning modules through a total of seven videos with follow up 'quiz' questions and critical reflection prompts. Following the completion of the professional learning programme, participants were invited to upload weekly diary entries using the same critical reflection prompts and take part in a semi-structured interview.

Although response rates for the survey aspect of the app were acceptable, uptake was slow on the professional learning programme, and even slower on the diary entries aspect. It became clear that interview candidates would not be abundant in any way, and a rethink of the participation criteria became necessary. This was the second adaptation of participant inclusion criteria, with the first being the widening of the necessary requirements for the professional learning programme, when a number of

potential participants communicated that they were not currently teaching through a play pedagogy but wanted to take part in the research. In the end, the inclusion criteria for the participants no longer centred around completion of the full programme, and more on their engagement with the research as a whole (whatever that meant for them in their context). Therefore, there were participants who had completed the professional learning programme but not the diary uploads, a participant who had been unable to engage with the app through their own personal circumstances preventing inclusion during the time frame of the study, and one participant who had completed the professional learning programme but had done this in person over a year prior during the pilot in-service day.

Despite the original intention to engage around two hundred survey respondents and thirty-two professional learning participants (as estimated in my ethics application), sixty-five survey respondents and four interview participants took part in the end. According to a BERA report, teachers' workload constraints and additional pressures on their time and resources can be a barrier to participation in studies, and research engagement is perhaps seen as an add-on luxury even if it may benefit individual and school-wide professional learning and development (Furlong, Menter, Munn, Whitty, Hallgarten & Johnson, 2014). Leat, Lofthouse and Reid (2014) note that teachers participating in research collectively within a cohort of like-minded professionals may have an advantage over teachers taking part in isolation, and this could be a potential future development for the research to maximise participant recruitment and retention. Furthermore, negative connotations of academic activism and 'undermining the status quo' can put individual teachers at odds with school leaders but a culture of engaging in

research within a school can promote a more 'radical' and 'risk-taking' approach that embraces research-based professional learning and school improvement (Leat, Lofthouse & Reid, 2014). It is also recognised that the timing of the final 'release' of the research app meant that teachers were required to engage during the summer term of the Scottish school year, often seen as one of the busiest periods in education, which may have had an impact on recruitment and retention of participants. An openness to research participation being viewed as an everyday element of teaching practice is vital to effective research engagement, according to Furlong et al (2014), and this includes support from school leaders to maximise the ability to participate without creating any added burdens to a teacher workload. Although the in-app design of the research was designed to minimise burden on teachers' workloads, it is acknowledged that the interview would create additional time and commitment and this may have been a barrier to participation for some. In the end I was considerably more flexible in how, when and where the interviews were carried out and by whom, in recognition of these constraints.

In research, two possible types of interview may exist, depending on what approach the researcher takes and the lens through which they perform:

> Our assumptive strategies for engaging with others through inquiry implicate both what we can know and how we come to that knowing… whether we seek emergently relational ways of knowing, for example, or the transmission of knowledge from one subject to another… matters.
>
> (Kuntz & Presnall, 2012, p 741)

Taking a page out of Braidotti's book, Kuntz and Presnall (2012) envision the interview as "a cocreation among (not between) multiple bodies and forces" (p. 733). Drawing upon

a relational/diffractive and reflective/reflexive approach to the interviews, the interview dialogues demonstrate an openness to intra-action between researcher and participant as well as a connectivity between the interview events, the discussions and the ideas that emerged, and fed into subsequent events, discussions and ideas diffractively. Bearing in mind the postqualitative resistance to traditional interview approaches, the openness and authenticity between researcher and participant disrupts the typical boundaries and flattens the social dynamic from that of researcher and participant to co-constructors of the research. There are elements of structure and procedure that are often unavoidable for the purposes of doctoral research, however, such as indicating proposed methods that could be easily recognised by those not well-versed in researching through 'the posts' for academic approval. In planning a semi-structured interview and noting the critical reflection theme that permeated the professional learning programme, questions and prompts were developed based on the same '5 Critical Questions' from Sharratt (2016) that were used throughout the professional learning programme and diary responses. These were never intended to be prescriptive, however, and acted as tools to help shape the discussion while allowing flexibility and co-construction of the interview proceedings. As a result, each interview took a different path from the last and grew from the participants' own contexts and their varied engagement with the research. The main questions were:

1. What, if anything, do you feel you learned during the study?
2. How do you feel you are doing, as a teacher, now that you have completed the study?
3. How do you know that this has been the case?
4. How do you think you might improve or build on this moving forward?

5. Where, if anywhere, do you think you might go for help or support with this in the future?

Several follow-up prompts were provided as potential clarifiers. The initial questions are deliberately open to interpretation to foster individual critical reflection, as they may have been learning to do on the professional learning programme. However, if they are stuck, go off on an unrelated tangent, or are not feeling comfortable with this level of openness, they would be offered the follow-up prompts. The suggested prompts were:

1. In what ways, if any, do you think your understanding, practice or approach may have changed as a result of participating in the study?
2. Are there potentially any examples of how completing the study has changed how you view your role or responsibility towards autistic pupils in your class?
3. Can you think of any ways that you see a clear difference in how you approached or understood autistic pupils in your class before and after your participation in the study?
4. Can you think of any ways that you might be able to use the learning and development from this study to improve or build upon your experiences of the last few months to continue supporting autistic pupils in your class?
5. Are there any structures, support mechanisms, colleagues or sources of information that you think might be useful to you moving forward, or do you have any suggestions as to what might be useful to help you continue to support autistic pupils in your class?

Both the initial five questions and the five follow-up prompts were approved by the ethical committee for the purposes of the study. Ethical approval was granted on the

basis of applying standardised methods (interviews, surveys, and so on) through a critical posthuman lens.

Formal and structured conversations have tended to be the norm for interviews in educational research, with around 90% of educational research relying on conventional interview data (Blom, Lasczek & Cutter-Mackenzie-Knowles, 2025). This approach employs binaries such as 'interviewer' and 'interviewee', but Blom et al. (2025) encourage a flatter, more equitable distribution of roles, as equal (but different) participants devoid of meaningless power dynamics, and

> the term 'conversation' in educational research has been used to describe the data that is collected informally and outside the boundaries and conditions of a formal interview.
>
> (Blom et al., 2025, p. 2759)

Participants may feel (metaphorically speaking) tied down by the constraints of the "mother tongue" of humanist rationale in traditional qualitative interviews, but where researchers embrace "relational ways of being and knowing" they are freed from this and, "no longer understood as subjects, become an assemblage of multiple historical, present and future encounters" (Kuntz & Presnall, 2012, p. 236). Interviews are essentially human interactions, and some theorists contend that all human interactions are interventional and potentially transformative, according to Marn and Wolgemuth (2017). This frame of mind may be particularly beneficial for researchers intended to "complicate and critique understandings… in the interviews to foster moments of ambiguity" (Marn & Wolgemuth, 2017, p. 366). Sometimes researchers may find that, when it comes to examining interview transcripts, known qualitative language and conceptions fail to explain the nature of the 'talk' sufficiently, and so they turn to a

posthumanist framework to draw on more relational and transformative insights (Marn & Wolgemuth, 2017). Instead of dichotomous 'old' versus 'new' data analysis for interviews, blending and blurring humanist qualitative approaches with posthumanist or postqualitative approaches can be seen as "a strategy of dislocation" as a way to "offer more comprehensive accounts of empirical phenomena" (Smith, 2019, p. 2). The researcher's aim for this might be to destabilise and disrupt the data through applying deliberately incompatible types of method and analysis, according to Smith (2019), fracturing concepts and 'regnant discourses' in a 'mischievous' way. Lenz Taguchi (2012) notes that interview data is often assumed to be passive information that must be interpreted by the researcher systematically: naming; structuring; and representing. The drawback of this is that

> Interpretation thus falls into the representational trap of trying to figure out what the participant really means… bound by themes and patterns understood to emerge from the data.
>
> (Lenz Taguchi, 2012, p. 269)

Turning away from interpretive notions of coding, categorising and identifying themes from dialogues, but at the same time not simply letting the dialogues speak for themselves, Lenz Taguchi (2012) proposes diffracting them, opening them up to imagining 'newness' (although 'new' is potentially contentious in postqualitative research). Smith (2019) suggests that prescriptive narratives can be problematised by simultaneously reading, writing and thinking within this ethico-onto-epistemology of postqualitative inquiry. Being diffractive in thinking through interview dialogues means reading it while becoming with it, working among and with it as it emerges, activating our whole thinking and feeling selves to embody not just the words that are transcribed but the whole interview encounter (Lenz Taguchi, 2012). Furthermore, the researcher's

reflective musings can become with the research, reading new words with already embodied theory as the foundation, and writing the thoughts that begin to shape new ideas, taking root and terraforming together, indistinguishable from one another:

> Like the practices of reading and writing, the third practice [thinking] cannot be clearly separated out as a distinct practice. As I read and wrote and swam in ideas, these ideas began to seep into my bones.
>
> (Smith, 2019, p. 4)

It is a transformative passage from one stage of becoming to another, or a sense of being in a 'zone of indetermination', according to Lenz Taguchi (2012). One cannot be distanced from the data ontologically or figuratively, and researchers have to acknowledge their responsibilities in producing knowledge. At the same time however it is important, according to Parker and Knight (2025) for researchers to avoid imposing their own preconceived notions upon participants' responses in interviews (such as baselessly assuming the respondent's answers imply 'sour grapes', in their example) as this would be dismissive of their personal accounts. The answers cannot necessarily be taken at face value, and need to be considered fallible, giving participants a voice without enforcing 'ventriloquizing' them. As participants' comfort levels balance out and they feel at ease, or even recognise an affinity or parity with the researcher and their onto-epistemology, moments of authenticity and truthfulness can peek through that might not otherwise have been revealed, when the participants feel empowered or start to trust the researcher's positionality (Marn & Wolgemuth, 2017). This, however, creates a vulnerability that participants may later reconsider upon reflection, according to Kuntz and Presnall (2012). Giving participants and opportunity to revisit their dialogues, and contribute to their self-understanding and personal interrogation of the data from their discussion, can strengthen the rigour and quality of the interviews (Parker & Knight,

2025). Providing follow-up opportunities for participants to "share reflections, reactions and further contradictions to the initial interview" creates a space for "flickers of transformation" to occur (Marn & Wolgemuth, 2017, p. 368), and both researcher and participant can critically explore not just the dialogue but also their comfort levels and perceptions retrospectively. Kuntz and Presnall (2012) provide an example of when a participant requested an opportunity to revise her responses after reading the dialogue, in order to preserve a more (in her eyes) professional opinion, and "chose to rewrite her perspective, her voice, to sanitize its transmission" (p. 742) out of fear of repercussions from her superiors upon publication. In the context of this research, participants were able to review the interview transcripts if they wanted to check on the accuracy, tone and completeness of their transcripts, adding or commenting if they wished.

Often, postqualitative researchers wish to open up the possibilities beyond a traditional qualitative interview and standardised data, and carry out interviews with this in mind, according to Kuntz and Presnall (2012). However, the way the researcher (or indeed the participant) *intends* to ask/answer/respond within an interview is not necessarily how the interview will be performed (Marn & Wolgemuth, 2017). When their intentional minds become entangled within the phenomenon of the interview, and when faced with examining states of mind, identities and experiences through the questions and discussions, both researcher and participant can shift and flex in their thinking in unpredictable ways. This was evident in instances of my contributions to later interviews referring to ideas discussed in previous interviews, building on the concepts in response to the participant's own musings and trains of thought around the same concepts. The resultant discussions had the sense that

> each [train of thought] reconfigures the world in its becoming – and yet they never leave us; they are sedimented into our becoming, the become us.
>
> (Barad, 2007, in Marn & Wolgemuth, 2017, p. 373)

These trains of thought (or 'lines of flight' in Deleuze-Guattarian terms) can extend beyond the space-temporal bubble of the interview itself and transcend from a singular event in time and space to be "carried forward, brought to bear in other future entanglements" (Marn & Wolgemuth, 2017, p. 373). By acknowledging lines of flight, Kuntz and Presnall (2012) suggest that we can find new possibilities for our meaning-making and ways of being, and resist standardised knowledge of the world. In resisting normalisation, the interviews and their data are communicated in this chapter in a dis-ordered fashion. Not sequentially by chronological date but as their stories emerged – through the natural becoming of the chapter as my reading, writing, and thinking it through flowed. The dialogues that emerged have been read diffractively – so the writing (and thinking) that followed became embodied in the research assemblage in a symbiotic and relational fashion – and

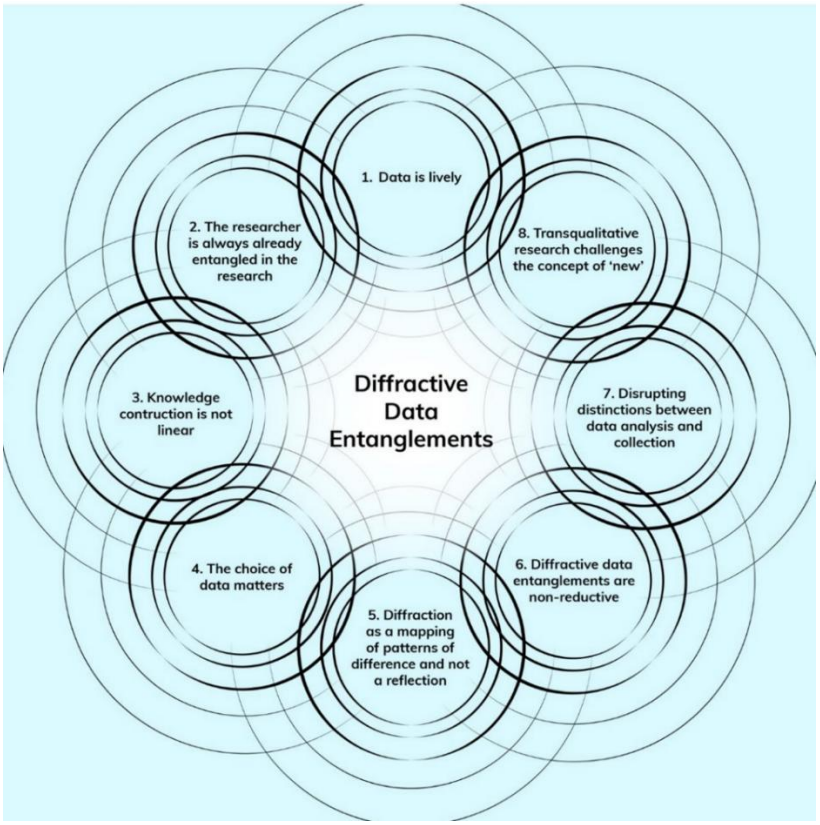
> When reading diffractively I want to read *with* the data, understand it as a constitutive force, working with and upon me in the event of reading it… This is not about uncovering the essence or truth of the data. This is an uncovering of *a* reality that already exists among multiple realities being enacted…
>
> (Lenz Taguchi, 2012, p. 275)

In a suitably symbiotic fashion, I have performed, digested and in a sense *transliterated* the interviews and their narratives, which may come across as somewhat discursive but intends to interrogate the research interviews thoroughly, effectively and ethically. Although transliteration typically refers to the transformation of words from one alphabet or script to another using a system of corresponding representations, using it as a metaphor for postqualitative practice allows us to explore how best to represent

original spoken words. This involves seeking the closest familiar interpretation within an ethico-onto-epistemological framework, rather than asserting absolute certainty in conveying the literal, original meaning. One such framework is presented below.

iv. A framework for presenting the data - diffractive data entanglement

In becoming diffractive, researchers enter into several types of data entanglement, according to Blom et al. (2025). Based on a number of relational theories (including those by Barad, Lenz Taguchi, Taylor, Murris, Jackson and Mazzei, among others), Blom et al. (2025) explored a visual representation of data entanglement principles:



[IMAGE 12: BLOM ET AL. (2025) DIFFRACTIVE DATA ENTANGLEMENTS VISUAL]

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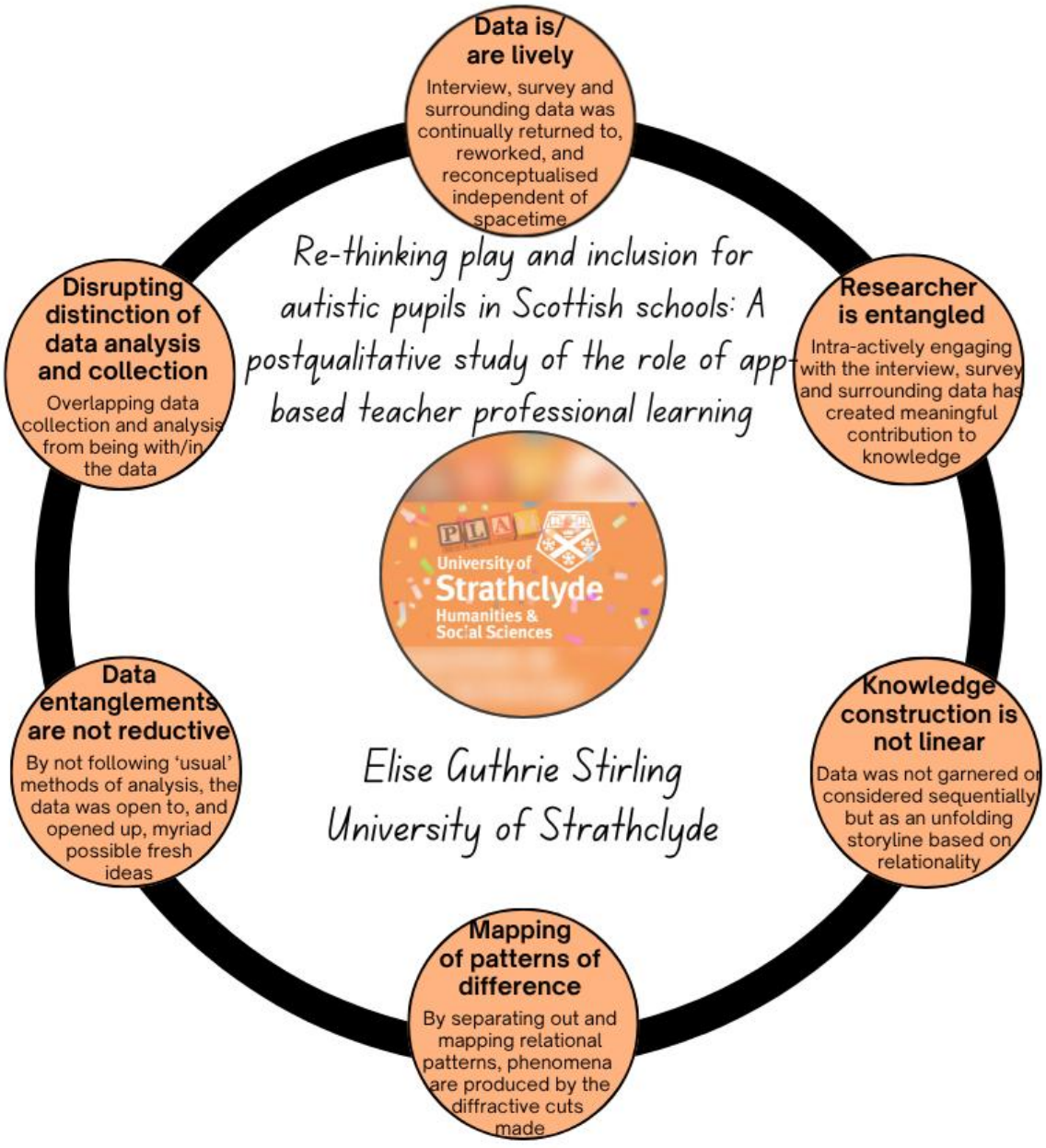
The above figure illustrates how data can be explored generatively as it resists being interpreted and condensed into neatly packaged categories. Through this Diffractive

Data Entanglements process, guided by values such as responsibility and response-ability, the traditional ways of 'doing' data collection and analysis are troubled (Blom et al., 2025). Adopting this process, 'data collection' in the interviews becomes "a form of discourse happening between and within the data" and it acknowledges the researcher's intra-action with, and influence on, the data, and "the researcher plays a part in the performance of the data that cannot be denied" (p. 2764). In this process, data is not sequentially ordered or linear, it is relational and evolving – "knowledge construction… is a meshwork, entangled and complicated" (p. 2765). The data, through this process, is 'undecidable' – "as if we have chosen something that has chosen us" (Maclure, 2013, in Blom et al., 2025, p. 2766) – the data 'glows' and 'glimmers' to the researcher and is in constant flux. Nothing needs to be recreated through the data within this process, it is unrehearsed and authentic, and it pushes back against dominant discourses as "diffraction tends to the differences rather than sameness" (p. 2768). Data is *expanded* to the extent that it "opens up, myriad possibilities for its analysis and subsequent findings" (p. 2769), and this process allows for the researcher to communicate the data in more emergent, iterant and open ways. In practice within this approach, there are no distinct 'moments' of data collection and analysis, it is not separate from the rest of the research, but it is present intra-actively with the other entities in the research assemblage – "all matter, matters" (p. 2771). Lastly, through diffractive data entanglements, within a posthuman lens, nothing is *new* per se – despite our everyday language suggesting that this is the case – because "matter is neither created or destroyed but transformed or transferred from one form into another" (p. 2772). As such, the data gets 'curated' so it can flow, grow, and expand as it is diffracted, and the stories are always becoming.

Taking insight from Blom et al. (2025) the diffractive data entanglement framework has been applied to this research, which has been illustrated in a visual inspired by the original:



[IMAGE 13: REVISED DIFFRACTIVE DATA ENTANGLEMENTS VISUAL]

Visualising six of the eight original principals as applied to this research

Though Blom et al. (2025) had a framework of eight principals, the revised visual demonstrates only six of these. According to Blom et al., this type of research should challenge the concept of 'new' in terms of knowledge. This can make us question what our research can contribute if 'new' is not a concept we should subscribe to. However, within doctoral research, students are constrained somewhat by academic standards. As noted previously, a comfortable balance of structure and disruption can be found within a 'loose but tight' approach to research, where "students need both space and a structured agenda" (Kuby, 2023, p. 138). Therefore Principal 8 has been omitted from the revised visual for this research. Furthermore, Principal 4 (the choice of data matters) was left out from the visual due to the partial dilution of the framework in this research. In Blom et al. (2025), the data is 'undecidable' and presents to us as something that has chosen us as much as we have chosen it. I was aware that, in the interviews, my 'teacher researcher' identity never fully flattened to that of co-participant and I was aware of *reciprocating* anecdotes and ideas, rather than *offering* them unprompted, to avoid imposing my own preconceived notions onto the participant (as per Parker & Knight, 2025). I note that much of the data 'glows' and 'glimmers' at various points in the research, and is in constant flux, but I felt that it did not fully embrace this principal to the extent where it could be considered as part of the revised visualisation. The remaining sections of this chapter allow a more detailed unfolding of the diffractive data entanglements, which will then be discussed in the next chapter.

v. Rhizomatic stories as becoming-data

Within the botanical theme of growth and expansion, a 'rhizome' is a connected mass of underground plant systems in botany, including tree roots, but in *A Thousand Plateaus*

(first translated in 1987) Deleuze and Guattari took umbrage to this concept being compared to trees as they argued trees are strictly hierarchical and solitary in their growth and development. However, as Abbott (2021) highlights, we have come a long way from thinking of trees as standalone, noncommunicative, nonintelligent objects, and can now consider them "purposive, deliberative, innovative, agential entities controlling their own existence" (p. 1059). As a nod to the ontological turn that advocates for the aliveness and connectivity of trees, I felt that these nonhuman beings deserve a revised rhizomatic acknowledgement through Barad's concepts of nonhuman agency, and so I encouraged interview participants to choose tree names as pseudonyms. The trees themselves are not the rhizomes, nor are their roots, but trees are indeed intra-active agents and cannot be denounced by the imagined Delueze-Guattarian reputation as isolated centres of power and knowledge. The participants each have different settings for their teaching practice, no two are currently in the same situation, but their locus for being involved in education is fixed at least for the time being while participating in the research. Whatever their context, like trees, each participant can

> not only adapt to their site, but also create or produce their environment as all living beings do. Thus… are not only experts in site-specificity, but the core creators of this world.
>
> (Arlander, 2025, p. 20)

We can relate to trees and acknowledge that they are 'infinitely entangled' in relationships, connections and reciprocities with the world around them – as well as learning from their subtle forms of communication – creating strong embodied and empathetic symbiosis beyond what is traditionally seen as normal (Abbott, 2021). A fitting analogy for postqualitative interviews, it seems. Arlander (2025), when talking

with trees, noted that communication had begun as one thing and developed into another form and then another, with all the conversations taking shape in different ways. However, according to Barad, discursive practices are

> not human based activities but rather specific material (re)configurings of the world through which local determinations of boundaries, properties, and meanings are differentially enacted.
>
> (Barad, 2003, in Arlander 2025, p. 22)

In a similar vein, these research interviews have started as one type of communication and developed into another form and another, with all the conversations taking shape in different ways. Each interview has its own story to tell, and the stories-becoming-data take their own forms through my transliteration of the dialogues – seeking the closest familiar interpretation, rather than asserting absolute certainty in conveying the literal, original meaning – by reading, writing and thinking through the entangled interview discussions and their assemblages as can be found below.

v.1. Jacaranda

Beginning with the story that perhaps best shows how each of the conversations have taken shape in different ways, I will start with Jacaranda, a former participant of the pilot study, where the relational entanglements of the environment, surroundings, life circumstances and non-participant humans within the vicinity altered the makeup of the interview altogether. Impacted by the challenges of parenting, the location of the interview was adapted to accommodate Jacaranda's individual needs. Meeting instead at a soft play facility and moving our conversation to be in among the play, the dialogue almost immediately turned to the shared interest we had in autistic play and the pursuit of authenticity in this context. Before even explicitly asking the first question of the

interview (and therefore not yet recording the dialogue in the same way that other interviews were thus far conducted), we had become immersed in deep conversation without the boundaries of the researcher/participant roles. With regular interjections from a playful child offering imaginary ice cream products and requesting a change in play location. We adapted without hesitation and continued to converse without structure or intent but covered most of the questions that would have been asked regardless. According to Kuntz and Presnall (2012), "shifts in physical space [and] affect" can make participants "more comfortable to talk" and "these agential spaces are not simply empty backdrops before which interviews occur" (p. 742). Whilst this type of embodied interview was not planned or even an option that I had considered as a researcher, I can see the benefits of such an approach. However, evidencing the 'data' as an interview without having thought this adapted approach through prior, I made a request at the end of our encounter together for the participant to provide written responses to the same questions given to other participants. In hindsight, the freeflow discussions were already highly valuable insights, and could have been the ideal example of an artifact that transcends words on a page – but instead a co-recollection of how the words felt as they were being spoken, and the shared meaning-making between two equals among other human and nonhuman actors within the assemblage at the time. To make the most of this type of encounter, "it requires peripheral vision, whole-bodied listening, diffractive seeing and nomadic thinking" (Kuntz & Presnall, 2012, p. 743).

Throughout the immersive and embodied interview we discussed the professional learning programme as it had been presented to Jacaranda originally. As part of the pilot

programme, she had engaged with the modules in-person rather than in-app and had since had a far longer period of time to reflect and act upon the ideas presented on the day. We had engaged on social media since then, with both of us sharing common platforms for opening up dialogue about ASN and inclusion in Scotland. Prior to agreeing to the interview, Jacaranda had shared a recommendation online for one of my book chapters and captioned it with:

> I've had the privilege of learning from Elise before, and find her work compelling. She has a unique insight and an excellent way of sharing information, leaving you feeling empowered!

She noted that my work encouraged her to challenge her own misconceptions about authentic autistic play. Having read this, I felt a sense of circumvolution, contemplating that her unprompted retrospection on my work and its effect on her may be comparable to the reflections that current participants would have engaged with on the programme. So we began our discussion with this. We talked about our similar positionalities as teachers, authors, and parents, how the research that I am doing and the output from my work so far has contributed to the field, and how Jacaranda's own personal and professional experiences have changed her outlook since participating in the professional learning programme over a year ago. Having done other interviews in the weeks prior, and in sharing with her the iterative nature of the diffractive data entanglement, we explored the emergent ideas around the app's potential as a springboard for more widespread engagement with the Embracing Authentic Autistic Play programme and beyond. Moving on to musings of critiquing our shared observations of ableist and non-neuroaffirmitive practice, particularly in the early years, and mutual frustrations about the lack (or 'inappropriateness' as it was strongly intimated) of professional learning opportunities around autistic authenticity and thus

the value of raising the profile of neuroaffirmitive, anti-ableist and non-discriminatory inputs for teachers and other practitioners. We experienced together the 'glows' and 'glimmers' that Blom et al. (2025) posited researchers would likely experience, hinting at the unrehearsed and authentic meshwork of data entanglement. In co-constructing the dialogue as equal (but different) participants in the conversation, we mutually flattened the assumed hierarchy of the interviewer-interviewee dynamic, and we were immersed in dialogue-becoming-data without having actually even considered at that point that our 'interview' was already underway. Mindful of necessary boundaries as teachers talking about experiences in education (both personal and professional), my 'teacher researcher' identity never fully flattened to that of co-participant. To avoid imposing my own preconceived notions onto the participant (Parker & Knight, 2025), I consciously reciprocated anecdotes and ideas, rather than offering them first. This was a somewhat diluted version of the openness between researcher and participant (Kuntz & Presnall, 2012) and the 'embodied involvement' (Lenz Taguchi, 2012) that allows interviews to be truly relational and diffractive. In being transparent in these considerations, I am allowing myself and the data to remain fallible and contributing to the becoming-data honestly. Scottish teachers, in particular, have an ethical responsibility under CoPaC to ensure that collegiate discussions are not perceived to be unprofessional, disrespectful or unjustly critical of other professionals (GTCS, 2024). Balancing critical educational research with the diplomacy required to maintain the professional boundaries required by GTCS registered teachers perhaps lies in the code of practice itself, where it is noted that *unfounded* remarks and *dishonest* declarations are where teachers' honesty and integrity may be called into question. As such, in sharing examples of practice that we

have found questionable and justifying through our discussions why we felt it to be contentious, we were comfortably within ethical boundaries as professionals.

In her written response to the interview questions, Jacaranda reflected that prior to participating in the professional learning programme she would definitely have tried to include autistic learners in play. However, since taking part, she now focuses on taking their lead in play and supporting them to develop play that is most enjoyable to them. This was as a result of the gaining a deeper understanding of autistic play and building this into the knowledge and experience that she already had as an ASN teacher. She emphasised that her practice has moved beyond simple inclusion to accessibility, ensuring that strategies previously implemented with a focus on communication and regulation are included but not the main experience. Getting this balance is important for Jacaranda so that she in not 'taking over' the play, and instead of focusing on developing communication or sensory regulation through play, she is allowing the autistic pupil to lead the play in their own way. She recognises now that

> play may look different for this cohort of children, but I must take a step back and play a supporting role rather than trying to lead the play and direct learning through it.

Jacaranda added that it is no longer about changing how the child does play, instead shifting perspective and adapting the environment to suit, is a key lesson for her. Through participating in the programme, Jacaranda feels she has an increased appreciation of the value of not just play overall, but play seen through the child's eyes, accepting how they engage in play and how this may be different but equally as meaningful to them as other types of play are to other children. "Creating space" for children to engage in their own preferred play "without feeling the need to fit into

neurotypical patterns" has been something that she feels she now has the better understanding of and now has the confidence to support them better. On reflection, Jacaranda noted a potential goal for her own professional development, which is working on the play opportunities that build on the child's interest instead of veering them towards a particular style of play. She did, however, note that she feels "better equipped and more able to explain my play choices and opportunities that I provide" and the programme has given her the confidence to do so.

Having always been an advocate for neurodivergent pupils, the professional learning programme has given Jacaranda "both direction and material to channel this advocacy in the best way for my pupils" and although making change happen is hard, she feels that this makes meaningful change more possible. We had talked a lot about the ability to think outside the box as many schools in Jacaranda's experience have warmly and openly responded to learning new things, and she feels encouraged to do this after participating in the professional learning programme. Although she has always felt a responsibility to act on behalf of autistic pupils at both school and local authority level,

> This programme gave me the 'ammunition' I needed to be able to fight for equal opportunity to play, and for us to appreciate meaningful autistic play.

Jacaranda shared that there have been 'tricky moments' where some staff have not understood this and dismissed play preferences. However, these moments were navigated with more confidence to justify the importance of natural play experiences. This was thanks to the programme giving her the language and knowledge to validate the play that the child in her example was engaged in. She herself was taking a step back and observing a pupil that she was sharing space with, without taking over, when a

staff member took umbrage to her 'letting' him play with an object in a way it was not 'supposed' to be used. Jacaranda noted that she not only voiced how important it was to allow that play, as long as it was safe, but she did so within earshot of the pupil to validate their play choices. She followed this up with a communication-friendly conversation with that child, ensuring he understood what the staff member had not, and reassured him of his right to choose how to play.

Since participating in the programme, staff have initiated conversations with Jacaranda about authentic autistic play, and she has confidently engaged in that dialogue, so she appreciates that this confirms this newfound confidence in practice. Furthermore, she has noticed that pupils seem "calmer and more open around me when it comes to play" and this reassures her that she is a safe adult that they choose to engage with when she is observing them. This is not something that she (or they) felt certain about previously, and consequently she has witnessed "a number of really cool play opportunities" which may have been 'redirected' or 'told off' by other staff. Jacaranda attributed "a deeper understanding of the autistic experience and how this might manifest in play" to participating in the programme and feels that as a result she gives pupils more space for autonomy, relinquishing control over play opportunities in lessons. She recognises now how relevant this topic is, having seen first-hand how effective even small changes can be, and plans to continue researching, reading and discussing authentic autistic play moving forward. Having 'adequate' literature to draw upon is key to making sure play is appreciated and valued in all forms, according to Jacaranda, and is aware that the app offers this opportunity. She feels that using the app could really make the most of the literature and resources available to teachers, but also that talking about it in a

'community of understanding' will be vital to the learning journey going forward. Jacaranda admitted not being aware of any structures, support systems or resources currently available for teachers in this context. She pointed out that contacting me would be an intuitive mechanism for seeking support and advice, expressing that she feels I am "knowledgeable and approachable" and that she had already felt "so supported" since doing the programme at the in-person session over a year prior. She joked that she had a 'pile' of reading to get through on the topic but knew who to turn to if she needed any more resources or information to support autistic pupils in her context.

Following on from the encounter we had, and in the interests of diffraction, I decided to look back at the critical reflection that Jacaranda had engaged in following the in-person professional learning programme that she took part in. On the day, participants were encouraged to provide a video log to record themselves answering the 5 Critical Questions in the context of the information they had received on the day and how this might look going forward. It was interesting to note that Jacaranda had commented that she felt empowered to make changes to her language and to justify why it was important to change how we see play for all our learners, and that she was looking forward to advocating for change for autistic learners, challenging what she and others were doing moving on. We had already become entangled as colleagues and peers now, so going forward from this point we were aware of each other's activities within education and the wider ASN community, but in her reflections Jacaranda had noted that she would keep in touch to clarify things and make sure we were all 'working along the right path' and maintaining a level of 'consistency of practice'. Once we had

established some good practice, she expressed a wish to share those practices and start 'working together to make that positive change for our learners'. Looking back on these reflections having since met with Jacaranda again it was apparent that working more collegiately, as she had imagined, was happening – albeit perhaps in a different way to what she envisioned at the time. When we met for the research interview, we shared a sense of coming together again as if no time had passed and got straight to talking, but also as better informed and more confident professionals in our inclusive language and our ability to justify the need for change. These were the things that she had reflected on in her video log – I did not remember this being the case and it did not seem that she did either – but this appeared to confirm the agreed value of the professional learning programme in each of our contexts (both now displaced teachers no longer in class) through almost 'accidental' repeated reflections.

In reading, writing, and thinking this through, it occurred to me that in previous qualitative research some of these aspects would have been 'coded' as features of themes such as *language* and *justification*. Making these connections diffractively allowed a natural development from dialogue to data without the need to process the words artificially. Removing restrictions in time and place, dismissing the idea of the interview as a one-off event, and acknowledging that data is more than just words spoken in response to questions, I now had the beginnings of that which is becoming-data – through a story that spanned beyond the confines of the interview itself. In the earlier chapter establishing the research assemblage, I talked about how stories are very different from narratives. Narratives often fail to capture lived experience and lean towards dominant discourses. Whereas stories of people, place, circumstances, or

experiences, can give voice to the lesser known, to valid, valuable and validating lived experiences, and contribute to new knowledge that would otherwise go unheard. Under traditional approaches to interviews much of the story would have gone unheard for Jacaranda, or may not have happened at all given the circumstances, and taking the diffractive approach has allowed for fresh insights – becoming-data – to emerge.

v.2. Peach

Emerging from that story I became immediately immersed in another. As I sat in the busy bar restaurant that I had chosen to read, write and think through the entangled interview data, by sheer coincidence I was greeted by a familiar face – my second interview participant, Peach. She was keen to see how I was getting on and asked about the writing. She told me a story about her sister who was also completing her doctoral degree imminently and we discussed the job opportunities that can influence our choices in life. We returned to the topic of the interviews and she laughed at how awkward she felt reviewing the transcripts I sent her to read. She felt sheepish at her regular use of filler words and verbalised pauses, and I reassured her that it was not an issue but also that dialogue between ourselves and her two children (who were in attendance at the interview to allow for participation in the absence of childcare) had been removed from the transcripts. I had felt uncertain about doing so, given the importance of authenticity and flow in the diffractive approach, but excited utterances from children and the adults' responses could not contribute to the becoming-data and I felt it was more ethically sound to remove them from the transcripts. We laughed that no one wants to hear our shrill child-speak responses anyway. But the rest of the words mattered then, and still do now.

We had begun the interview by acknowledging that, in Peach's case, she had not met the criteria for participating in the professional learning programme, and so her interaction with the app had been minimal. We discussed the barriers she had faced as a teacher who had been out of class due to personal circumstances, but was very much interested in the use of the app and how the research could have a potential impact on inclusion for autistic pupils. She had been keeping abreast of the progress of the research on social media and reached out to me to suggest that she could be a potential interview participant despite having not participated in the professional learning programme. In resisting traditional approaches to interviews, I considered this an opportunity to find valuable insights without the constraints dictating 'suitable' participants. Peach was working in a different capacity as a professional, and felt that being part of the research would be beneficial to her practice in her own context, despite not meeting the 'inclusion criteria' of having an autistic pupil in her class. We chatted about how we could adjust the interview questions to suit the circumstances, and we began to talk about potential barriers faced to accessing suitable professional learning and how the app could be useful for that. Immediately Peach began critiquing her experiences of 'passed down' information on neurodiversity in the classroom and how this being based on fixed ideas was not necessarily working out in terms of learning how best to support pupils. She applauded the aims of this research, describing it as trying to relay that into the mainstream discourse "to people who are actually working with these children so that they can actually do something that *is* beneficial and not to their detriment". In illustrating her views on current discourse on the neurodiversity 'issues', Peach suggested that teachers potentially have a habit of saying "This is what

we do. This is what our school does. We have a sensory room, and we take them there." In acknowledging "that's maybe not necessarily what updated research or evidence shows us" Peach indicated that this is what she found most interesting, was that 'understanding'. She is a keen 'research person' by her own admission, and finds the theory as interesting as the practical strategies, which is what drew her to participating in the study. Having talked her through (and demonstrated) the app features, we noted that participating in the video survey and asking self-critical questions about what types of play would be welcome is essentially the first stage of reflection in the app, and although critical reflection is not explicitly requested at this point it eases participants into questioning their expectations of play are in the classroom. Quickly summarising the professional learning programme through the titles of each module, we then looked at the 'recommended resources' section of the website, where participants are signposted to authentic autistic play resources for further learning. Peach offered an anecdote on her recent experience of a professional learning programme where she felt the combination of reading and videos worked well and, within this programme, having asked participants to question their expectations about play prior to beginning the modules seems to be a useful addition.

In having mentioned this, I responded by emphasising that I tried not to be transmissive or act as an expert in any way, and that I felt it was important that everyone brought along their own experiences, their own backgrounds, to the professional learning programme. I posited my role as being more of a facilitator – I had no intention of building a how-to guide – I wanted to offer a different way of thinking so that people could take that away and "question their own practice, question their own context" and

so on. I acknowledged that previously in the pilot programme, participants had expressed discomfort in realising that their practice in the past may have been detrimental for some pupils, but then they left feeling positive about making changes in that sense. This prompted Peach to reflect that, like anything in education, "you've been doing it a certain way, and then something else new comes in, and this is now the best way to do it, and it's like, well you question it initially" and then added, "if you can see and understand that actually, that is [the best way to do it]... it's almost that you have a responsibility to always look for the better approach." This responsibility was an interesting concept, and it spoke to the aims of the research, but seemed novel to me in the sense that pilot participants had indicated an awareness of empowerment to change but not necessarily any obligation to do so. This is in spite of GTCS (2021) standards requiring teachers to have professional responsibility for challenging biases and understanding their duties towards children with additional support needs and disabilities. I shared with Peach a mantra of mine that helped me be self-forgiving when I was unlearning the narratives I had come to know personally and professionally – "you don't know what you don't know" – and my role was to provide an evidence base to teachers (within the context of the study) and potentially others down the line. Peach expressed frustration that the knowledge alone should be enough to make a difference, because without the knowledge (that is being offered through the professional learning programme) she queries "what are we doing?". Schools may have working parties for play, "but not specifically for children who maybe don't play in the same way... what are we actually doing to support them when they're in the class when they're actually probably most dysregulated" – and we agreed that taking them out of class to avoid dysregulation is also simultaneously taking them out of the environment where their

peers are getting to play. They lose the opportunity to socialise, and Peach emphasised that "socialisation is the biggest and that's what play's all about, isn't it?" Peach offered an anecdote about a child who is automatically taken "out of the classroom until they've kind of regulated slightly" but she admits that "I wouldn't know if that was the right thing to do. My gut feeling is that it's not, because all that's doing is taking the child away… then you're not actually dealing with the triggers." This reflection prompted me to ask if she meant that "prevention rather than cure" was the better option, and she was questioning the current approaches, but has no current answers to her questions, which she agreed seemed to be the case.

This brought us on to the subject of the potential value of the professional learning programme, even within her context outside of the classroom. I shared that a previous interview participant had raised the idea of the app being a 'jumping off point' where people could begin the professional learning programme but go on to take it into the real world, discussing it with colleagues and creating opportunities to network and have peer support. Peach agreed that this had worked well on a course that she had engaged with previously, although what happened was "one person kind of went and got all the information, and then fed that back to the school" but she likes the idea of "bite size" information with the potential that "if I wanted more information or I wanted to look into it, this is where I was to go… I would prioritise that". She went on to say that she sees the value of being able to say "Well actually, that's not going to work, but here's what some recent research tells us… Why don't we give that a go rather than doing that?" and acknowledging when something is not working. I pointed out that this conversation was actually answering many of the interview questions, how do you feel, how are you doing,

how do you know, and how might you improve on this moving forward? So the only remaining question was where, if anywhere, would she go for help or support with this in the future? Even though she still had the potential of the app and the recommended resources for professional learning, where else could she go? Pondering how difficult she often found it to speak to people in education who "have either a very traditional view, or are set in their view" as a practitioner who questions the status quo, because in teaching "you kind of just get told" (what to do). Peach went on to say that culture is 'huge', and she had learned to critique and question systems and policies, and not to take things at face value, but "the whole teaching culture needs to understand" and she only began doing this when she studied her Master's degree. Until that point, she reflected, that although she was never set in her ways "certainly I assumed what I was being told within teaching was true" in terms of governmental policies in particular. She felt that she had been viewed negatively in the past for questioning and pushing boundaries, but essentially this came back to the culture of the school and local authority, noting that

> it could be political, it could be cultural, or it could be a combination of everything… It's how they go about it that can change. But everything in education is very much done because it was done like that for years and in a job that's meant to be ever-evolving, why do we still do…?

This circled around discussions about leadership and hierarchies, so I queried the impact that she felt this culture has on inclusion, and Peach expressed that she believes it has an indirect impact "if the leadership team are not practicing what they are then preaching, as in all children should be included" but that she herself had never been in a school that had been unsupportive in this way. She mentioned that she knew people who had felt unsupported and went without help from the leadership team,

which becomes a difficult situation for all involved, with children struggling and teachers feeling more unhappy in their jobs. I probed the matter further by asking if my understanding of her thoughts was accurate by offering a summary of

> I think what you're saying is, no matter how much an individual teacher goes out of their way to research and find resources and all that kind of stuff. You're still going to come up against barriers in terms of hierarchy in systems and support?

Peach agreed with this interpretation and she added that time pressures and staffing issues were consequences of these barriers, with teachers being left in 'turmoil' struggling to implement supports that are planned by teams but without additional time or staffing to meet these expectations. We established through this discussion that for her, the goal was to engage in self-reflection, finding a better way, and changing 'simple things' by become more knowledgeable. She pinpointed that relationships were key to inclusion, affirming that "my initial want would be to make them feel safe and secure and happy" in the classroom. I asked Peach if she felt she was in a position where she was thinking "I know what I want to avoid but I'm not sure what I can do" and she agreed that she can empathise and sympathise with the pupils who are struggling, she enjoys building rapport with them, but she lacked information on neurodiversity and its impact on learning, habits and emotions. I wondered what she imagined the app and the professional learning programme could provide for her in this sense, and she indicated that she expected to learn about what play would look like and how different children with autism, ADHD and 'that sort of thing' could present in class. Notably, she highlighted that she would like to know more about this so that if she saw this play in her classroom she "might not necessarily be quick to stop that from happening" as she may have done in the past due to the expectations of structured and purposeful play in

schools. This led Peach to recollect a child in her class years ago who loved Lego and felt that this should have been freely allowed but she was told "he couldn't just play with Lego all the time" by school leaders it had to be structured and purposeful. She rejected this boundary and followed the child's lead, albeit using his play preferences to navigate the pre-set curriculum. I suggested that she was allowing herself as a teacher to change her mindset to "kind of break the mould and do it in a way that suits the child" where he was still playing and learning but doing it in a way that was in line with his preferences. She lamented, however, that it became much harder as the children got older and the curriculum become more crowded and class sizes become bigger. Adding that the child now has an autism diagnosis and zones out regularly in class, Peach acknowledged that because he is no longer allowed to play to access the curriculum he is not engaging with his learning anymore. Asking if she thought it would be different if his play had continued, Peach pondered "perhaps if he had teachers that understood his situation more and were able to adapt their teaching more" but added "who knows?" in doubt of her own response to the question. Framing this as a 'shift in mindset' I asked if the idea of 'breaking the mould' was more widely known, would she feel more confident in that response? Without confirming or denying this, she indicated that being 'quite skilful' as a teacher mattered too because teachers "need to do things that don't necessarily, aren't going to be the way that you do things." Peach reflected that she felt that she had handled children seen as 'super problematic' were not that way with her and it never came down to her being able to teach that child better, but the culture that she nurtured in her class. She addressed the biases and preconceived ideas that other pupils had about these children, which had resulted in an ethos where "everybody just blamed him because he was the 'bad boy', he was the 'naughty boy' that did things" and

she diffused this by showing this was not the case. I suggested to her that because she was "modelling that inclusive attitude… he was less othered… more able to participate" and she agreed that was a good way to put it. Peach felt a bit sheepish by this affirmation from me, however, adding "I'm not, I would say, an amazing teacher… but like, I'm able to understand what that child is thinking" and I reassured her that this is simply empathy. She quietly agreed with this and I sensed that this was a natural close to the conversation, and we also had two restless children in the room as we talked, but I highlighted how glad I was we had this conversation and hoped that we were leaving it on a positive, affirmative reflection to move forward with. As it turned out, when we met again through happenstance Peach was so positive about the experience, re-engaging quickly with the conversation, and confirmed that her story (becoming-data) will continue to be entangled within her own practice as well as her interest in the professional learning programme and the outcomes of the research.

v.3. Willow

Although the remaining interviews were more qualitative than postqualitative in their 'method' – partially as a result of the initial diffidence I felt in terms of practicing research postqualitatively, and partially due to the formality brought to the table in the meeting room with polite greetings and a somewhat business-like approach to begin with – they were still open to intra-action between researcher and participant as well as connectivity between the interviews. Willow's interview (which was the first of the interviews) seemed to have had quite a lot of impact on my thinking, particularly in terms of how a semi-structured interview could fit comfortably within my ethico-onto-epistemology in practice and what becoming-data would look like in this context.

Initially, though, I found myself quite abruptly starting the interview with a request for feedback on the app itself – asking how she felt about navigating the app, to which she responded quite simply that it was straightforward, even for someone who is not 'tech savvy'. I followed up with querying her experience of going through the modules on the app, and again she commented that it was straightforward and she enjoyed the fact that it was 'to the point' and avoided having to go through lots of paperwork. I realised quickly that I was not 'on task' with the semi-structured interview questions and that these queries were not necessarily generating the flow of conversation that was intended in the interviews. In hindsight I have reflected on why this happened, and I have surmised that in my nervous excitement I felt a need for validation as a researcher and app developer, to ensure that my app was accomplishing the goals that I had set out to achieve. This was my first interview and I must have felt the need to reassure myself of this fact, seemingly, but this was me being 'fallible' as a researcher. Human. This data from the questions that I had asked her were not lacking in research value per se, but it had derailed the focus of the interview and perhaps taken Willow by surprise as I had set out the 5 Critical Questions as the main structure of the interview ahead of time and this line of questioning was not part of that. I quickly brought the interview back 'on course' to the intended subject matter.

When asked what she had learned during the study, Willow responded that it clarified "how important play is for our young people, regardless of the age and stage" and looking at what works for the individual child regardless of frameworks and programmes that rely on generic expectations. Following on with the additional prompt, somewhat clinically without necessarily engaging with the participant's own words at first – which,

had I done, I could have picked up on the fact that this participant was working in a secondary school context earlier and probed more about the importance of the content regarding 'age appropriate' play – I asked in what ways her understanding, practice or approach may have changed since participating in the study. She indicated that it "gives you more confidence in using play" because often teachers get asked questions about what they are doing with (what is seen as) 'free time'. With a high adult to pupil ratio in her setting, she identifies that the young people have someone 'on them' all the time with the implication that this prevents them from having time to play due to the importance placed on 'doing a focus task' instead of learning through play. I wondered out loud if she meant that she was having to justify this to herself or to others (my first derailment from the 'official' line of questioning, which happened spontaneously by accident in a way but sparked a valuable dialogue) and she agreed it was both. She repeated that it was about clarifying "This is what we're doing. This is why it's important" because not every adult working with children and young people sees the 'necessity' for play. In pinpointing the value of the professional learning programme in achieving this, Willow voiced her appreciation of having the "backup from some research and information that you've had" to justify this stance and allow others to see the importance of play. Taking this a step further, I asked Willow if she felt that this was down to having the specific vocabulary to back it up or perhaps the additional resources, what kind of backup did she mean? Willow responded that language was important because there is a need to be clear and consistent but it was also important to have the tools to put the information into practice. I felt that this question tripped her up slightly and I was uncertain about probing in my own words for fear of putting words in the participant's mouth, so I cautiously reverted back to the pre-prepared questions

and asked about how she felt she was doing as a teacher on the whole now that she had completed the study. She reflected that she needed to look at her practice (it was the summer holidays at the time and would return to class in a month's time) because she was uncertain how to apply this due to "always having to jump through hoops" in the school environment. Willow expressed her desire to apply this newfound confidence to have the mindset of "allowing the children to have that time to use their play to learn more effectively… rather than just use it as time out" and developing the young people's learning through play. I asked her for examples of how completing the study has changed her views or perceptions, reiterating that she noted some perceptions of play time being trivial, perhaps in how she views her role or responsibility towards autistic young people. Willow dismissed the idea that her views had necessarily changed, as she had always valued the importance of play and inclusion, but it had "given me the confidence to be more vocal in my explanation of what we're doing and why we're doing it." She added, however, that even knowing the importance of it all, you can still get "lost in amongst everything you 'should' be doing" despite having always felt strongly about the importance of play regardless of age or stage. Willow went on to imply her view was an uncommon one in her setting, because there are perceptions that "play is for nursery, play is not for school" instead of recognising that "actually, play is for everyone… we can play and do our own thing."

At this point, I began to feel comfortable interviewing in a more relational manner, having settled into the idea of the mutual back-and-forth potential of the conversation as opposed to maintaining strictly interviewer-interviewee roles, and I gently offered a view (in response to her comments on perceptions) that the system was set up to have

different expectations of play in primary schools as opposed to nurseries despite both having similar curricular outcomes within Curriculum for Excellence (as per Burns, 2023, from the literature). Willow reminded me that, in her context, she was dealing with teenagers who were working at a curricular level that preceded even what was ordinarily experienced by children in the early years. She vocalised an uncertainty about the expectations of play for young people in secondary schools, indicating that it requires "taking a step back" and "looking how actually it is appropriate for them." This was a somewhat recent change in setting for Willow, which I had been made aware of prior to the interview, and this was quite unfamiliar territory for me too. I was grateful for her having brought up this aspect of her role, as it had slipped my mind (which was clear to her when I referenced the difference in expectations between nursery and primary schools without mentioning secondary settings). This held me accountable for my own assumptions and the conversation really began to take on the anti-hierarchical, flattened relationship that I had so far in my research known only in theory. I addressed Willow's background in working with younger children, and asked how going into that new context and the timing of the professional learning programme during that transition made phrases such as 'age appropriate' and 'developmentally appropriate' perhaps seemed different now? She acknowledged the timing and viewed it positively, implying that it was meaningful to show that play was important regardless of age even if that perception was not shared across the whole school because "you can do what you can in your room." She felt it would have had greater impact if shared to a wider audience, because "outside of [your room] it's how is that perceived, and being developed?"

Feeling inspired by her words, I once again deviated somewhat cautiously from the pre-prepared interview questions and asked Willow if she had any ideas about how to address that. She proposed that she would "look more at play in general as a wider network… as a council" and specifically "as a secondary provision where… you know their learning level isn't going to be the same as somebody in a mainstream high school." Highlighting that approaches are not going to be the same, she questioned why the way 'they' (the council and the school) are still working with a similar framework as mainstream schools with regards to play. I mused that Willow had previously indicated that in her context, the specialist provision was the only establishment of its kind in the local authority whereas in other local authorities there were often multiple secondary special schools. I suggested it was perhaps easier to address the issue at a school level without having to look at it as a wider council matter. I used an example from my own experience where I had worked in a specialist provision attached to a mainstream secondary school, and was able to use a play-based approach with 14 and 15 year olds who were working at a pre-early level similar to her pupils. I confessed that I had the support of management within the base and that in itself helped me to justify this to staff and anyone else who came into my class. I used this personal experience to prompt a reflection on whether or not Willow felt this would make a difference to her even on an individual school level. Confirming that it definitely would, she asserted that "we have somebody in play who was looking at play based learning last session" but she personally felt that "it's still a bit tokenistic" as it was using a focused approach for certain groups or certain individuals. She felt that, in theory, they supported it. But in reality they were failing to "look at it as how we can develop it throughout the whole school."

Delving deeper into that concept, I referenced one of my book chapters published earlier in the year (Guthrie Stirling, 2025b) where I used the example of a school that was developing 'play based learning' but their version of that was "this class is going to do this, and this class is going to do this" which looked good on paper but there was no individual differentiation, no choice, and no freedom. I contemplated whether that was even play in the end, and Willow immediately built on this with a further contemplation of whether or not it was effective at all if it was 'targeted' only at young people "at the lower end of the educational spectrum" instead of throughout the whole school. I put forward that it was almost as if play was reserved for children who were not viewed as academic and tentatively enquired if it was the case where

> correct me if I'm wrong, from what you're saying, it's almost as if they're saying there it's a backup plan… where they can't achieve the academic attainment, play based learning is being used as an alternative?

Willow agreed but did not offer more in response to this. I pivoted and asked if this was dependent on who the staff were, whether it was likely to be the teacher, the support staff, the health staff, how much the play was adult-directed or child directed. This was much easier for Willow to respond to and she confirmed that "it's very much adult directed… because they're choosing the resources they're using" and although some children are 'learning through play' it was coming from the adults. Highlighting that this again was not one of the original questions, almost apologetically as I felt that I had pushed the boundaries with my last deviation, I posed an opportunity for Willow to share how she might envision an alternative to this. Relaxing into this line of questioning, Willow emphatically shared that she would want to see the young people

having play throughout the school day, getting to choose what resources they want to play and learn with, and being able to do activities that are more fitting for them as an individual. Willow emphasised that this was opposed to "well, here's your choose box" where adults say "let's pull it out, and you can have something out of there" when young people may not want that. She envisioned learning from experiences in the community, going for a walk, meeting people, and other daily skills for life. Willow felt that this was "very much something that needs to be worked on and appreciated throughout the whole culture of the school and the education authority." Bringing the context back to play specifically, I asked Willow if she felt that the idea behind her vision would be that play itself does not need an 'end goal' but it was the process of play, the action of play, the experience of play, the discovery of play, the curiosity of play. That was my interpretation of her vision, with the child or young person leading that. She agreed, but again did not follow up with further comment, so I moved on again to another pre-prepared question.

I suggested that we had already touched upon this question in our discussion, and asked how she was doing and how did she know how she was doing as per the third question of the interview, but I suggested (given that she had shared that she felt her practice was minimal in her new setting) that she considered comparing her practice from the past to how she would approach it now. This worked well for her and she reflected that giving set activities in the past resulted in pupils looking bored and underactive, giving no feedback. Whereas now, she considers her activities more carefully for the young people in her class and she is getting the feedback:

> I'm getting the smiles like, you know, coming up to you showing you things or wanting you to get involved… and I think that's the most important thing, for certainly my young individuals is them wanting you to get involved, not you sitting on the fringes… when they want to bring you in and show you something, I think that's the real breakthrough.

I commented that "you talk about kind of like being on the fringe as kind of standard" and asked Willow what approach would she take "to make sure that you are immersing in that with them, and you are sharing that with them?" She replied that it was about having fun with them, not stepping back and saying "I am the teacher" but instead "you're doing whatever they're comfortable with… they see you as being fun and being silly" instead of being held back by boundaries. I agreed that this would mean that the boundaries were not just blurred, but in this case they would not exist, allowing the teacher to step into their world and removing barriers to their play. Willow chimed in that this means doing what makes them happy, letting them lead rather than trying to lead them. This took me to the question of how Willow might build on this moving forward, in terms of how play is going to look over the next school year with a new class. The answer was allowing opportunities for play, changing the mindset, bringing the whole team on board. She was critical of the idea that 'set topics' currently permeate the school curriculum and felt that these were not always particularly relevant to the young people, so she was compromising by considering ways to 'hit the theme' while making play high on the agenda through the pupils' own preferences. Teachers can be hesitant to 'let go of the reins' and relinquish control but letting the young people take control of their learning experiences can help them be more relaxed and "develop their own learning at a pace and in a way that's relevant to them." Referring back to what Willow said about doing things 'in your own room', and with regards to the systems and

expectations she referred to at a school, authority and wider education sector level, I talked about how no matter how much a teacher could try to plan for including themes and ideas they are still part of a school and they have rules and expectations. I noted that Willow seemed to be suggesting that

> you've got that kind of… ecosystem in terms of like, you know, you're not just a classroom. They have, you know, kind of fixed ideas about what's gonna happen. And you're saying, like, you can try and plan for including those themes, those ideas. But doing it in a way that supports the young people's play and discovery and curiosity and have them lead the way.

Willow agreed that this was the vision, continuing that anything other than this would be too 'contrived' and just 'ticking a box' which is potentially meaningless. Taking small, personalised steps to help the young person feel comfortable and happy in their life in and out of school is a much bigger priority to Willow. I asked how this might be factored into planning through play – considering the rejection of 'age appropriate' mindsets in favour of something more individual, how could play be used to develop those real-life skillsets? Planning for regulation through play was an important aspect of this for Willow, emphasising that sensory toys should be available to the child or young person at all times, not just when time is set aside for it. We talked about play as a facilitator not just for learning itself but as preparation for learning so that calm and regulated pupils can be more able to learn. At this point it seemed that we were almost coming to the end of the interview, and Willow's answers were becoming briefer, so I moved on to the final question of the interview asking where she might go for help or support with this in the future. I could not have predicted the passion and enthusiasm that Willow had for addressing this question. We ended up spending a great deal of time engaged in a very reciprocal and non-hierarchical discussion with Willow seeming to at last

recognise that affinity or parity with me and my onto-epistemology. This, as Marn and Wolgemuth (2017) suggested, created moments of authenticity and truthfulness that might not otherwise have been revealed because the participant felt empowered and trusted the researcher's positionality.

Going for help or support in the future, according to the participant, is "probably where the difficult part comes" because she acknowledged that even if there are working groups or networks created that look at play-based-learning and develop new ideas through sharing evidence and experiences, there still is not a 'knowledge base' that teachers can turn to with suitable evidence like the app. If it was possible to develop "that systemic knowledge and an evidence base" Willow felt that consistency would lead to the mindset of "allowing children to develop their skills through their own sense of play and allowing them to be their authentic selves" as opposed to what was currently happening. She felt that currently, teachers are going looking for their own evidence around play, and this can lead to problems where different evidence creates different knowledge bases and different scenarios. Willow expressed a desire to ideally have interested colleagues starting with the same knowledge base using the same evidence to build it up and speculated that

> ultimately we'd be looking at how we develop that base within the working environment and develop it wider, and then hopefully spread it throughout the school.

Regarding those evidence bases currently available, and in reference to the concept of working groups, I pointed out that in Scotland early years practitioners and professionals use Realising the Ambition and other guidelines to support all kinds of play, and most local authorities seem to have leaders and networks supporting play in

the early years. I enquired whether Willow considered this to be of any benefit to her and her colleagues, by perhaps taking part in meetings or collegiate activities alongside the other play-based practitioners. Or would it have to be a different system to support the development of play in her context? Initially she considered this to be of benefit to everyone, but began to think out loud about the complex differences between early years contexts and her own (and other) ASN setting then decided that "there would be a lot of confusion, and I think it might have a negative effect on the secondary network" before contemplating the possibility of "some sort of hybrid, maybe… which allows the benefits of play to be developed at a secondary level" without it being absorbed or overshadowed by the early years network. She elaborated that, locally at least, secondary ASN provision was already 'so disjoined' and anything that is available to teachers and headteachers should also be available to support staff because, if second hand information about professional learning is passed down it fails to hold its original value. It becomes diluted and open to interpretation so that the consistency is there. She asked me if I know whether other local authorities have secondary ASN play networks or anything similar, and I confessed that although I had heard of some examples, it was hard to find information on because everyone calls it something different. I mentioned titles like 'play pedagogy' and 'play is the way' but noted in particular that I had specific examples of 'continuous provision' in secondary ASN settings within a nearby local authority. I grumbled that "if you don't know what it's being called in various places, there's no consistency" and noted that (despite my best efforts) there is "no way to pull that together and to get that sharing of best practice." I pondered whether or not perhaps a wider collaborative, rather than just on a school or local authority level, sharing the evidence, knowledge base, skills and best practice

could be done on a Scotland-wide basis. I expressed frustration at the lack of opportunities to do so, wondering where the guidance and support is "if we are ditching the 'age appropriate' 'developmentally appropriate' kind of mindset." I told Willow that the follow up prompt asked if she thought there might be structures, support mechanisms, colleagues or other sources of information that she thought might be useful to her moving forward but pointed out that she had already said she felt there was nothing currently available. I pivoted again based on the conversation so far and asked, if the professional learning programme was to be more widely available to teachers, support staff, early years officers across the board on a Scotland-wide basis, could she suggest any ideas as to how that could be disseminated?

From this point on we discussed with gusto Willow's notions on "some sort of national collaborative that has a strong lead" which could potentially "have a monthly meeting that has, you know, the latest updates" as well as "newsletters and things that are giving out all this information." Collegiate working and information sharing could accompany "some kind of surveys as to, you know, where's the evidence" to find out about what is working, what strategies people are using, what the best practice is. She suggested that peer observation and visits between settings within and across local authorities would help, but there would need to be a structure to keep it in place. I echoed that if there is no consistency and everyone is using different language, it is hard to pull that together, and I agreed that it could be positive

> having some sort of national hub where local authorities, individual professionals, practitioners, can share that language, share the practice, and kind of pull that together into some sort of database, I guess.

Willow then proposed that having a strong body to support an initiative like this could provide more value, or at least more perceived value, and others can see it as "this is a school-based initiative" rather than individuals taking it upon themselves. I worded this as rather than just filtering down at a school level, it would "grow arms and legs, to kind of be more established across Scotland." Parents, in particular, struggle to support the acceptance of play in the secondary setting, according to Willow, and confirmation that it is a wider scheme would make it more acceptable in their eyes. I queried if she had any idea why parents would be finding it difficult or potentially pushing back on play in the secondary ASN provision, and she speculated that perhaps even the locus of being in a secondary school building created doubt as to the value – because "play is for primary and nursery, you know, it's that sort of old school thinking… we don't play in secondary school." Willow joked that

> They go through the door, and there's a magic button pressed, and they change overnight because they're teenagers and they're at secondary school… so [parents] think that it's all going to be different. But actually, the young people are going to be who they're going to be… we need to embrace that and accept it and build from their strengths.

I asked if she thought across the board acceptance of play through a national presence would be successful. Willow emphasised that the actual value of play and play-based learning would never change, but the perceived value potentially could as sometimes people just do not see it as valuable. I pointed out that across Scotland there are organisations and institutions for play, as well as the updated play strategy and UNCRC being incorporated into Scottish law, then asked if she felt that she would connect these things with play in her context in a secondary ASN provision and whether the guidance available to play practitioners and professionals in the early years translated

to her own practice. Her answer was that it can but only if you find the information yourself – "nobody's being shown it… that's a big problem" – and yet in early years there are networks to discuss it and information is presented to them as soon as it comes out. However in terms of play in ASN settings, particularly in secondary settings, Willow feels teachers have to find it and push it forward themselves "and I think that's where we're sort of failing before we've even started." On querying whether she thought there have ever been instances of play being prioritised in ASN, she answered a definitive no. When I asked if any connection had been made between ASN and play at a local authority level, she thought briefly and decided she thought not. Even in the past, when she managed an ASN wing attached to a mainstream primary school, Willow reflected that:

> I think ASN has always stood on the back foot [in terms of play]. And even with the national policies, strategies and everything being brought in, as a unit we were never included. It was always for mainstream… nobody came and spoke to us… whereas actually being on board from the start, a lot of the ASN practitioners could have brought valuable information… it's a two way street.

I suggested it would be like a mutual partnership between the ASN sector and the play sector with everyone bringing their backgrounds and contexts together. Expanding on this, Willow lamented that ASN appears to be an afterthought in play but if the mindset were changed then ASN could be part of play strategy and planning from the beginning and they would be able to take on different perspectives. This could then have a positive impact on inclusion in mainstream, where children with ASN might otherwise be taken out of the classroom when they experience challenges they potentially "might be able to cope with it if there were different play strategies to use within the classroom."

This brought the conversation back to the theme of professional learning and I posited that, if ASN was not being prioritised in play and play was not being prioritised in ASN, presumably this meant that professional learning in the ASN/play crossover was not being prioritised? Indeed, Willow suggested that a training programme is required with "the right mindset" to develop a workforce who can bring in play and develop the learning more. Systemic change where ASN is prioritised and play is valued, that supports the workforce to develop their strategies and adapt to individual needs within play through professional learning, is very much needed in her eyes. I wondered then if the issue at play here was buy-in – across the board acceptance from teachers, leaders, parents, support staff, everyone – and whether this could be achieved through the evidence-based justification that came up earlier. This was ratified by Willow, somewhat stoically however, so I went on to clarify my summation of her ideas by stating that establishing a framework for that change in mindset with access to the resources and evidence could create the consistency and justification she referred to. I wondered if she saw that being an online resource, an in-person programme, or a government strategy, for example, in order to be maximised across Scotland. Willow assuredly confirmed that it should be a mix of these things and more – a national strategy, online resources, face-to-face learning, practical observation, collegiate discussions. She considered this important because

> for the young people to get the benefits of it there needs to be something more solid and concrete in place, so that everybody can see that actually, this is the standard way forward.

Echoing again that consistency, language, justification and mindset were key to getting play right for children and young people with additional needs, Willow confirmed that "some sort of national acceptance and framework" would potentially achieve that. I

proposed to her that maybe, in simpler terms that "rather than a 'how to' manual of 'this is how to do play', you're almost suggesting it's 'this is how to change your mindset'?" and she responded "Yeah. That's how the play opens up here." I briefly explained my positionality in terms of challenging the dominant discourse and changing the status quo, rather than providing instructions or recommendations from the results of the research. I noted that, to accompany the shift in mindset and consistency (of practice and approach, rather than specific individual activities), the buy-in was perhaps an important factor as well. Willow suggested that the app could contribute to that as a starting point, with critical reflection continuing through the diary entries, and potentially further check-ins and follow-ups as well. This could open up discussions with other professionals and developed further with wider dialogue, according to Willow, and I asked if using the app as a 'jumping off point' then developing the professional learning into a more collegiate approach (both in-person and online) would be her vision for that? She confirmed that different local authorities all starting with the app and having local discussions, then opening it up nationally "on a sort of continuum." Local representatives and forums taking it forward as a priority, would create buy-in and potentially a national strategy with the programme feeding into that and "we'd all be singing from the same hymn sheet… starting from the same point." This could lead to shared practice, success stories, reassurances and confidence-building, according to Willow, and

> you sometimes do think "I'm stuck. I don't know what to do" but if you've got other people that are saying "Look, I'm in the same boat. What did you do? How did you do that?" you know? Or "That's ok" you know?

It needs to be ongoing, it needs to not be forgotten about, and it needs to be something that is always up for discussion. Throughout the year, all year round, set days and times would be her suggestion, putting time aside for it and keeping the importance of it in their sights. That is what creates buy-in in Willow's eyes and help people see the value it holds for children and young people with additional needs including autism.

v.4. Cherry

Cherry's interview, thought generally structured around the five main interview questions and situated in the formal meeting room, was a naturally flowing conversation that kept a brisk pace due to the participant's time restrictions as she had an appointment to attend straight afterwards. I expressed gratitude for her agreeing to meet with me in spite of this and we got straight to it. Immediately, Cherry indicated that the reflective questions within the app had made her think about the play that she would ordinarily accept not only in her own classroom but as a 'non-class contact teacher' in other teachers' classrooms too. In considering this Cherry recalls "for the most part… we accepted quite a lot of various different ways of playing" in her previous school, with the exception of 'rough and tumble' due to risk assessments. Logistically, in terms of space and safety, she felt this was less appropriate. Looking back, Cherry wondered (while answering the questions in the app) if she/they allowed 'too much' but concluded that "actually, I don't think we do… we allow quite a lot of varieties of play" which she decided was a good thing in the end. I picked up on this 'too much' concept and asked what her idea of 'too much' might be and instantly picked up on some hesitation from Cherry:

> I don't know, maybe they had too much free choice or… we had an inspection, and because of that we had two different viewpoints come from two different people… it was quite unsettling.

She went on to say that one of the 'inspectors' (who were from within the local authority rather than the education inspectorate) had come into the school and said the play was too free-flow, that they should not have everything be free choice in primary. Cherry explained that in her current school she had in primary one, primary two and primary three, so she felt she had a good 'scope' of what play looked like at that school in the early years and beyond. She shared that the teachers asked this inspector what they were expected to do instead, and their response was to have adult-directed activities. The teachers all felt that this was more akin to active learning than play, and that was not what they had set out to achieve. The other inspector was a play specialist in early years, who wanted to keep the play as it was even though first one clearly wanted this to change. Cherry pointed out how this inconsistency had led to her (and others) having doubts about what types of play are 'appropriate' in the mainstream classroom, which explained her hesitation earlier when I asked what she perceived 'too much' play to be. She found herself questioning:

> Who do you believe? They're both from the council, then who do you choose to go with? Do you choose to go with some more structure play… which takes away their ability to choose?

Cherry explained that the outcome was to go for a blend of the two and hope for the best. They took the route of having structured tasks with rainbow coloured lollipop stick at stations, which took play across the school day amongst free flowing play where the children had the choice of what to do and when. She noted that, initially, the teachers had been asked to do these 'rainbow play' tasks every day (seven per day) but emphasised that this was too many tasks for both teachers and pupils. So the teachers

collaboratively decided on seven tasks across the week. They were still play activities, Cherry clarified, but they were more adult-directed. This worked well within the expectations placed on them by the first inspector, and supported some pupils who had preferences for specific types of play to come and do other activities. She indicated that some children would continuously revisit the same activities:

> You would find the same children were always at the block play. You would find the same children were always in the home corner.

Ordinarily I would probe the participant's implication that this is a bad thing, or inappropriate, but I was conscious of her previous hesitation to talk about what 'too much play' might be, and I felt it would be unfair to push this point too much. Cherry moved on without prompting, however, to say that they chose to implement an initiative to promote pupil voice on play. I suspected that she offered this up as a somewhat defensive position due to knowing that my positionality in this research as well as the content of the professional learning programme would advocate for allowing this repetitive revisiting of play preferences. I was stoically receptive to see where Cherry would go with this response as I did not want to make her feel like she would or should have to respond in any particular way with me. I nodded and smiled to encourage her to continue. She elaborated that the teachers would gather the pupils to ask them their thoughts on play, what it looked like for them, or what they wanted it to look like. They asked about resources because at one point they were asked to remove all the plastic from the class. At this comment my face clearly gave away my incredulity and my stoicism was betrayed by my obvious expression. Cherry half-laughed and continued "I know… I do get that they're trying to go down a Froebelian theme but…" and she then sighed in exasperation, arguing that "children love Barbies, and they love cars!" but

quickly appeared concerned that this was 'wrong' to say. She wondered out loud if it maybe sounded too controversial but pondered "if we were to take all the colour out of their world…" and drifted off into silence. Concerned that this indicated more hesitation, I tried to reassure her that Froebelian principles did not rely on throwing away plastic toys (instead the approach simply encourages educators to make ethical choices about reducing waste and considering the natural environment) but instead Cherry appeared to misinterpret my reassurance as an assumption that she had studied Froebelian principles and was unsure of these. I went on to briefly say that Montessori and other approaches promoted the use of natural materials but Froebelian principles were very much about freedom and choice. However, I sensed that I was not being very reassuring so I pivoted to ask whether the external agents such as the inspectors she referred to previously, with their different backgrounds and conflicting viewpoints, had an influence on these choices. I was a bit flustered by my previous comments, however, worried that I had derailed the conversation too much, and failed to articulate my question very clearly, fumbling my words and eventually landing on "were you aware of their backgrounds and where they were coming from?" Noting simply that one was definitely from an early years background but not knowing the background of the other one, Cherry chose not to elaborate on this, but went on to state that the compromise with 'rainbow play' worked well in the end. Allowing her to continue uninterrupted, I noticed Cherry pivoted slightly to mention that one thing missing from mainstream primary classrooms was the opportunity to benefit from an additional adult during play:

> You want to do play? Great. You need to put another adult in. I think… it comes down to budgets, comes down to not having staff.

Teachers had activities planned, which they called 'Very Important Play' tasks, where literacy, numeracy and health and wellbeing inputs were carried out at the teacher's table. These were mostly play-based but admittedly 'teacher type tasks' and offered an easy set up for her as a non-class contact teacher going in and out of classes for short periods at a time. Cherry felt it was very well set up, and easy to "go in and run with it."

I came back to the interview questions, conscious of time constraints, and asked if there were any ways that her understanding, approach or practice might have changed since participating in the professional learning programme. Cherry reflected that, previously, she would not have said she was a fan of the local 'play is the way' approach, having concerns about what effect 'too much' play might have on attainment. This was largely due to do with the government focus on 'closing the attainment gap' which is a lot of pressure on teachers, she felt. She mentioned that she once wondered "What are we doing to further their learning?" but concluded that play is learning. This was not in response to the professional learning programme, but as a result of being in a primary one classroom for the first time having mostly worked in upper primary until then. Circling back to the question, Cherry indicated that she had realised what was going on in her current school (which was a recent, involuntary transition) was not working:

> I think I walked into a primary one classroom, and I walked into a primary two classroom, and went… Why are there so many tables in here? That was my first genuine, unfiltered thought.

She described the setup of her old classes, which were organised around a play based curriculum, and lamented the stark contrast with this setup which was comparatively lacking in space and resources for play. I commented that this seemed similar to what

the first inspector had recommended in her previous school but Cherry disagreed, stating that it was "possibly just not set up as well" and there was not enough to keep the pupils engaged. We mused that it was contradictory to have a council-wide initiative for play without providing the setup to make the most of this. Cherry shared that she and another colleague considered supporting the other teachers to set up their classrooms, but concluded that "I don't know how long they've had on their play journey… to develop their play" and felt that there were restrictions being placed on them from above. She commented that

> Apparently, they're not allowed to remove the tables and I've not got to the bottom as to why or who said that.

Realising that, although we were having a rich discussion about the status quo, we had not touched upon the impact of the professional learning programme because these were all reflections from before taking part. We had not yet discussed how the status quo might be impacting on autistic pupils in these classes. So I asked Cherry if she had any examples of how taking part in the programme had changed view on her role or responsibility towards autistic pupils in the class. She indicated that she was impacted on both a personal and professional level, highlighting the importance of building relationships and recognising the importance of finding out their preferences and providing them with opportunities to explore these was key. Giving an example of one child who loved maps, Cherry described opportunities provided to explore globes and atlases in the classroom and using this to help him stay regulated in class. She went on to say that if autistic children are not regulated, "they're not learning, they're not taking in what you're saying" and that recognising this was key to helping them on their play journey regardless of age and stage. Cherry added that she felt it was easy for her to

identify children with additional support needs (with or without a diagnosis) and reflected that moving forward she now recognised that identifying what might support them best was just as important. She acknowledged that this is different for every child and support must be tailored specifically to the individual.

To clarify, I asked if she felt that this was a clear difference from before participating in the programme and after, which she confirmed, and I recalled that she mentioned the impact of the questioning in the app making her think this through. She replied that it has changed her thoughts on what play looks like, and

> I know it sounds funny, but, obviously your questions and everything from the app made me go, "oh, that is what that's called, and yes we do that!"

This indicated that the app provided Cherry with language, with an additional comment that it helped to be able to label the play. Focusing on this comment, I queried whether the hierarchical, linear progressions of play were how she currently viewed these labels. Cherry responded that, no, this was definitely not how she viewed it now. She recalled, when previously doing play observations, they always looked for 'teachable moments' during the play and planned for next steps based on these encounters. Although she did not expand on how she viewed this differently now, I asked if

> naming the types of play, and accepting the non-hierarchical kind of approach, has this changed how you would observe and plan?

Cherry responded that, yes, this would definitely change moving forward. I wondered how she might improve or build on this based on what she had taken from the app. She considered improving play settings to be a priority, ensuring that all children are getting the same opportunities not just in her school but in all schools. The benefits would not

just be for autistic children but all children. When asked how she would move that forward, Cherry responded "I don't know if that's a job for me to do" and expressed a wish for that job to exist. I asked, in the wider sense, not just within her control, did she see a way forward for that? Cherry confirmed that one way would be to ensure there was a consistent message across the board:

> Two people from two different positions can't come in and say two conflicting things. I think they need to be on the same page…

She also reiterated that having additional staffing and resources to support play was essential and this had to be universal, not dependent on catchment or class.

Honing in on the main message to finish up the conversation, I asked Cherry if she saw a place for the app in this vision. She confirmed that yes, if more people had participated they would understand play better and "it's fair to say I think there's some practitioners out there who are… set in their ways" who would like to see things done "the way we've always done it" but they need to evolve. Education is always evolving, and that includes technology, and there is no point in teachers refusing to change the status quo because "what would be the point?" I asked Cherry if she had any thoughts on how to make the app more widespread to achieve this, and she felt that 'spreading the word' could achieve this. She indicated that in her circle she was "one of very few teachers who probably knew about it" from social media. I wondered where she thought it would need to come from and she immediately suggested that it should come from CPD. I clarified if she meant "from a council point of view" and Cherry confirmed that council-wide CPD would be her recommendation for making the professional learning programme more widespread. I queried whether or not the attitudes she referred to earlier might pose a

barrier to embracing the framework presented in the programme, but Cherry admitted that she was unsure because she has experienced so much inconsistency in her different settings that she could not tell yet what the barriers might be. She reflected further though, when I mentioned about the desks she had talked about, and added

> It seemed like play was allowed, it just didn't seem like there was enough provision… space to play… it didn't look like I wanted to play there.

Cherry went on to say that if it looks inviting and well-resourced then it is probably a good play area but if it is overcrowded with desks and has no space for sand and water, for example, then how can children get these experiences? Adding that not having sensory experiences for autistic children was a definite barrier, Cherry went on to say "I suppose I've answered my own question" implying that she did actually feel that attitudes were a barrier after all.

As with the other interviews, I asked Cherry if she could think of any supports or sources of information that she felt would help her learn more about this topic in the future and she referenced a local ASN wing where the depute headteacher in charge of the unit had taken steps to 'devise' their own curriculum. Having come in from outside the local authority, she suggested that he had decided the current ASN provision was not working for the children and now the curriculum is entirely individualised around each child's interests and specific needs:

> So, for instance their health and wellbeing, it focuses on life skills, being able to get dressed and things, and what they also do is they find what their children are interested in, and they take that forward. Yeah and they provide them opportunities for play, they provide them with opportunities both inside and outside.

I thanked her for that specific example and told her it was a nice way to finish the conversation off. This was where we concluded the discussion due to Cherry's available time being over, and although I felt that the conversation had veered away from the purpose of the interview about the app and the professional learning programme quite a lot at times, it was still valuable to get an idea of challenges currently being face by teachers in mainstream attempting to engage pupils in a play based curriculum. Upon reading, writing and thinking through this interview, it was still possible to pick up on similar topics to the other interviews arising through the discussion with Cherry. In considering these diffractively, it creates discussion points that can be considered intra-actively with other data from the research, including the survey responses from the first section of the app. One thing in particular that sprung to mind while I was considering the intra-activity of the data from Cherry, I thought back to what Willow had said about wanting pupils to be able to learn across the curriculum from going for a walk, meeting people, and other daily skills for life. She had felt that this was something that needed to be developed as a whole culture across the local authority, and I surmised that she was suggesting it was the process of play, the action of play, the experience of play, the discovery of play, the curiosity of play that created the most useful learning experiences. This seems to be what the depute headteacher in the ASN wing that Cherry credited with rolling out in the unit that she praised highly. Unbeknownst to Cherry, as they were both unaware of each other's participation in the interviews, Willow had previously been the manager of that unit and shared outside of the interview that she had come up against attitudinal barriers around developing these play-based skills for life in the time that she was there. It is interesting to know that the current leadership has not faced the same difficulties in implementing that, but unfortunately

the reasons behind this are unknowable within the limitations of the interview data gathered.

vi. Diffractive Survey Data Entanglements

In having multiple means of gathering data in this research, I found myself questioning how 'being postqualitative' in considering what the data means could potentially create a barrier when it comes to survey results. Likert scales, traditionally a method used in quantitative research, provide the researcher with numerical data about attitudes and views towards a specific area of the research topic. Thinking through numerical data diffractively may seem challenging, but when the numbers become more than just integers in a database they too can become stories woven into the entangled web of the research. I considered how I might find the equivalent of 'reading, writing, and thinking through the data' for quantitative results, and in doing so I realised that as an additional support needs specialist I should know better to assume that the reading and writing of stories can only be about words on a page. I can use visual supports to help spin an *arachnean* tale. This diffractive and entangled analogy comes from Deligny's (2015) nod to Arachne, the mythic spider weaving her web for no reason or meaning other than a way to simply exist and persist in her state of being. In writing about 'The Arachnean' Deligny, inspired by the autistic children he cared for in the Cèvennes, noted that the networks of wander lines that "spin and weave themselves" like spider webs. However, the web is not a work of intent on the spider's part, according to Deligny:

> But can we say that the spider's project is to weave its web? I don't think so. We might as well say that the web's project is to be woven.
>
> (Deligny, 2015, p. 35)

Similarly, the entangled web of data in the research here, this "network of my own devising" is being woven, and like Deligny I was "radically unaware of the reason behind this making" and it certainly "required some determination on my part" (p. 36).

Burk (2016) relates the weaving of the arachnean web to digital entanglements because Arachne weaves her web merely to perform the act of creating a network and connecting the threads. This resembles the

> surprising, simplistic beauty and similarity with today's 21st century digital cartographies … the synchronized digital network landscape mirrors [Deligny's] early attempts at mapping a world outside of language.
>
> (Burk, 2016, online)

Networks on social media, smart devices, artificial intelligence, satellite navigation and "wireless cybernetic webs of synchronized wandering" can be mapped like Deligny's cartographic sketches but rather than simply expressing the results as numbers and patterns to be quantified and stratified, we can instead *transliterate* (my choice of wording from the previous section on interview data) digital elements into 'poetically spun stories' about modes of being (Burk, 2016). This element of technology makes sense in this context, due to the app-based nature of the research. As such, technology seemed the natural choice for creating a visual story to read, write, and think through the survey results. Hypothetically, inputting key words as titles for each video clip of children at play and their corresponding Likert results would have allowed a straightforward and simplistic statistical display with a choice of visual options and chart types. These passive and static diagrams may well convey quantitative information effectively for traditional research. However, in considering a posthuman lens for data visualisation, I made the decision to bring the numbers to life. Deleuze and

Guattari proposed that numbers can be imbued with ontology, according to Dixon-Román (2017), and even Barad suggested that quantitative instruments for enquiry can "ontologically (re)configure the world given their intra-actions with/in the world" (p. 61). Considering quantitative measurements diffractively means acknowledging that relationships with/between the researcher, the respondents, the instrument (in this context the Likert survey within the app), the numbers, the material arrangement and the resultant discursive practices are all intra-actively entangled. As a result,

> numbers, measurements, or quantitative data are a product of myriad forces; they are indeterminately ontic and semantic, produced and producing, intra-acting agents. Thus, the question is not whether they "capture" or "validly estimate" that which they are purported to measure… how might these intra-acting agencies enact, produce, or come to *matter*?
>
> (Dixon-Román, 2017, p. 62)

This lens moves us beyond representationalism (much like the interview data) and towards the production, enactment and becoming of numbers as ontological forms of knowledge and broadens the possibilities for analysis. The video survey results are not singular, they are part of a multiplicity of diffractive data entanglements. How the data is transliterated within the context of this research must account for this multiplicity, including the importance placed on the Internet of Things (IoT) and digital technologies within the design of this study. These multiplicitous nonhuman and human elements of data performativity of the video survey could be brought together through technology, with digital device use and human attitudes amalgamating to create a far more 'poetically spun story' than basic, discrete graphs on a page could. The impact of technology on educational research can have a number of benefits, and

> digital data and devices are reconfiguring social science methods and the very assumptions about what we know about social and other relations. To think about this well we do not simply need to

> rework methods technically, but also to rethink their ontological assumptions…
>
> (Ruppert, Law & Savage, 2013, p. 30)

Ruppert, Law and Savage (2013) posit that digital methods are giving rise to a new ontology of the social, but researchers must acquire deeper understanding that digital data and devices do not simply give us means for decoding social lives, but offer intense and contextualised data performances on the research topic, rather simply represent it objectively. This includes "the digitisation of traditional data-gathering devices such as surveys" (p. 31) as in this context of the in-app video survey, which can become digital agents that act in and shape research assemblages. With the aid of an AI assistant, together we created a 'Batch Likert Chart Generator' that allowed for all 82 video clips to be accompanied by the Likert results presented as an animated graphic. Using artificial intelligence for this element of the research allowed for maximum efficiency as I was less familiar with web-based coding (such as HTML and Java) and the Python libraries that ordinarily dealt with data visualisation were less equipped to effectively generate the video chart envisioned. Working collaboratively with an AI assistant allowed me to voice my preferences, adapt to unexpected issues, modify errors dynamically, and produce a tool that gave me the output required to create the animated graphic of results. The code produced was easily hosted online, and the interactive batch generator can be found on the Play Research website. The combined Likert results video and play video clips (in alphabetical order, for ease of synchronisation) were merged using video editing software in a 9:16 format for optimum viewing on mobile devices and social media.

My first thoughts upon 'reading' through the visual composition of the survey results was that it felt unexpected to me in a sense not to have a significant difference between the strong agreement of each social category of play (group, parallel, solitary) as being welcome in their class. Based on the literature, Parten's categories would ordinarily have been presumed to be viewed as more or less appropriate beyond the toddler/preschool stages (see section *4xii* for more on this assumption), and therefore I would have expected to see stronger agreement with the group play compared to the solitary play categories of videos. However, each of the three social categories of play shared an average of just under two thirds 'Strongly Agree' responses across the videos in each category. Each of the categories had less than one percent of Strong Disagreement on average across the videos in each category, and interestingly to me as I watched the final results unfold group play was the only category to have more than one video receive any 'Strongly Disagree' responses. Six videos from the group play category received between two and six percent 'Strongly Disagree' responses with parallel only having one video having any responses of 'Strongly Disagree' and solitary play having two videos with responses of 'Strongly Disagree'. This led me to look more closely at these videos, and the videos that received significantly under the average of 'Strongly Agree' responses. Half of the group play videos that received emphatic disagreement from the respondents were in the 'rough and tumble' category, notably 'pulling', 'play fighting' and 'tickling' types of activities. Across the rough and tumble category of group play, just over a third of respondents Strongly Agreed that it would be welcome, and a third of respondents Agreed it would be welcome, on average. This led me to consider what Cherry said in our conversation about her previous school accepting different ways of playing in her previous school with the exception of 'rough

and tumble' due to risk assessments where, in terms of space and safety, she felt this was less appropriate. I was intrigued by this comment at the time of the interview, but the focus fell on the 'too much' comment instead and so it was not probed further at all. I accepted her considerations of risky play with regards to space and safety, as this is a natural part of being a teacher. However, on viewing and absorbing the survey data something occurred to me. Many of the activities that were emphatically agreed with had similar implications of risky play that may require space and safety assessments and yet were considered welcome whereas the 'rough and tumble' group play was far less welcome it seems. Three videos from the 'games with rules' category of group play received high agreement levels for being welcomed in class:

- Football: 96% of respondents either Agreed or Strongly Agreed
- Jump Rope: 95% of respondents either Agreed or Strongly Agreed
- Parachute: 98% of respondents either Agreed or Strongly Agreed
- Tug of War: 88% of respondents either Agreed or Strongly Agreed

Arguably, these activities are similar to 'rough and tumble' types of play where children are making large actions and testing their bodily limits through coordination, speed and physical presence. The only difference that I could deduce from the data, is that it seems that one set of activities has rules and the other does not. I question, therefore, whether it is *really* the 'space and safety' that teachers are concerned about or is it the lack of normalised expectations that is the constraint? I look to the non-group categories of physical play within the video results to consider this further, drawing particular attention to solitary physical play. In the survey results, climbing/balancing/crawling activities received disagreement (around 8% of respondents on average Disagreed or Strongly Disagreed to welcoming these types of

play) and yet hula hooping received no disagreement despite being a similarly large/bodily physical type of play. In the initial categorisations, hula hooping was pinpointed as functional because it is a 'simple, repetitive muscle movement with an object' (as per the description in section *4xii*) and in the example it was a solitary activity. However, upon reflection, it may indeed be an activity that is construed by teachers as an activity with 'pre-arranged rules and the ability to make adjustments to these rules' (that is, a game with rules). Looking into this idea as I thought about the results, I investigated whether or not hula hooping might be a game with rules (as many play activities do potentially cross boundaries between categories). I found a historical entry which noted that

> back in the 1950s the activity was a positive craze… none of these eager hoop-fiends knew that their trendy game was nothing new – hoops have been played with ever since ancient times… hooping became "hula hooping" when 18th-century British sailors observed the similarity between the Hawaiian "hula" dance and the gyrating movements required to keep a hoop revolving around the waist!
>
> (Oliver, 2010, p 10)

Thinking diffractively, I reflected on my own experiences with hula hooping, and whether or not I had explicitly been taught (or taught any children) to hula hoop. I was unsure if an explanation had ever been offered to me. If ever in doubt about learning how to follow rules, many parents rely on Peppa Pig to explain to viewers how to perform an activity the 'right' way. In an episode of the popular children's show, Peppa and her friends are learning how to hula hoop:

> Madame Gazelle: Take a hoop each… Spin the hoop around your middle like this!
> Children: Wow!
> Narrator: Madame Gazelle is spinning the hoop around her waist.
> Madame Gazelle: Now you try!
> Narrator: Everyone is trying to spin their hoop.
> Danny Dog: Madame Gazelle, I can't do it!

> Rebecca Rabbit: It's not working!
> Pedro Pony: My hoop is not very spinny!
> Narrator: It is difficult to spin a hoop around your middle.
> Madame Gazelle: Do not be sad if you cannot do it straight away, it takes a lot of practice to get it right. Take your hoops and practice at home children!
> ---
> Mummy Pig: May I have a go?
> Peppa Pig: Okay, but don't be sad if you can't do it, Mummy.
> Mummy Pig: Right, here we go... Ready, steady, go!
> Narrator: Mummy Pig can spin the hoop.
> Mummy Pig: Have another go, Peppa!
> Peppa Pig: Ready, steady, go! Aww, I'll never do it!
> Daddy Pig: I've got an idea. Hold on, don't move! I think this will do it! What you need, is music!
> Music player: *You've got to spin, the hoop around and round and round, around and round! You've got to spin, the hoop around and round and round, around and round! You've got to spin, the hoop around and round and round, around and round!*
>
> (Astley & Baker, 2021)

Having a requirement, even a skills-based requirement would suggest that hula hooping is both a 'game' and has 'rules'. Madame Gazelle as a teacher, albeit fictional, acknowledges that she believes there is a 'right' and a 'wrong' way to hula hoop. Her instructions for using a hula hoop are rigid, and the children are not offered a more free-flow version of hula hooping in the episode. This would appear to corroborate the idea that having rules dictating the play appears to matter to teachers, very anecdotally and diffractively based on my own experiences are as a parent subjected to years of watching episodes of Peppa Pig!

In a similar vein, while absorbing the visualised results from the survey, I noticed that videos that had an element of 'tinkering' or playing with non-standard equipment appeared to be less favourably received than other types of play. A paired peer activity where they are tapping on items connected to a laptop via electrical cables had the

lowest recorded number of 'Strongly Agree' answers in group functional play, with only half of respondents welcoming it to this extent, and 4% of respondents either stating they 'Strongly Disagree' or 'Disagree' that it would be welcome. In comparison to this, parallel play with two children kicking in the ball pit appeared to be more favourably received even though it could arguably be considered a fruitless activity by most, whereas the objects in a circuit with a laptop could be considered a pedagogical activity within the curriculum:

> By contributing to investigations into the properties of a range of electronic components, I can select and use them as input and output devices in practical electronic circuits. SCN 4-09b
>
> (Education Scotland, 2019, p. 267)

Similarly, despite evidence that Virtual Reality (VR) technology can enhance learning (Rodolico & Hirsu, 2023), 14% of respondents Strongly Disagreed or Disagreed that VR play would be welcome in the classroom, and around a third each of respondents Agreed or Strongly Agreed it was welcome. This was significantly less than other non-technology based group activities. Technology-based play in other categories was similarly poorly received, with only a quarter of respondents Strongly Agreeing that solitary play on a tablet would be welcome in class and over a tenth Disagreeing altogether. Disagreeing and Strongly Disagreeing to welcoming certain plays appears to be making a definitive statement about attitudes held by teachers, because systematic biases would tend to lean towards acceptance of most types of play due to what Strojil and Cigler (2025) refer to as all 'socially desirable responding' where they may want to answer video surveys in a more positive way to appear more favourable within the context of the research. Knowing that the research is about inclusion and autistic play, respondents may have wished to refrain from being seen as non-inclusive, and respond

in a more socially favourable way. To respond disapprovingly to types of play in the survey would therefore suggest that their strength of feeling against that type of play warrants such a response. In contrast even playing in the rain and splashing in puddles did not garner such emphatic opposition, with these types of play having a 'Strongly Agree' response at an overwhelming 68% and 79% respectively. If we are using 'Peppa Pig' logic to justify the boundaries of such play, parents and children alike know the steadfast rule "If you jump in muddy puddles, you *must* wear your boots!" (Astley & Baker, 2004)

Seemingly, technology play is controversial enough to warrant the strength of feeling against welcoming it in the classroom and which led me to wonder if this relates to the previous matter of this type of play lacking rules. Evidently, teachers and practitioners may attempt to exert control over digital play by implementing

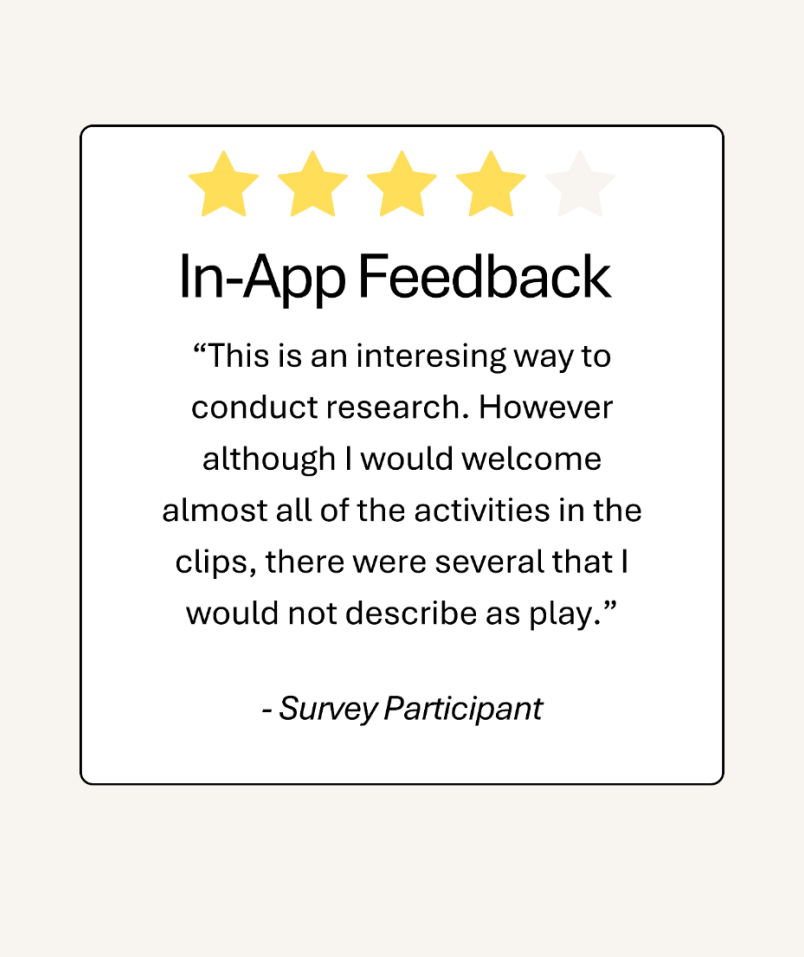
> a system of routines, rules and regulations which are managed and maintained by constructing a power hierarchy between adults and children.
>
> (Arnott, 2020, p. 63)

As I am reading, writing and thinking through these results diffractively, my thought processes continue to reflect on the interview discussions. Jacaranda noted that participating in the professional learning programme encouraged her to 'relinquish control' over children's play, Willow posited that teachers can be hesitant to 'let go of the reins' and Cherry had concerns that she might be perceived as 'allowing' too much play. This appears to substantiate the argument that perhaps teachers are less likely to welcome play that is outside of the bounds of their control. In terms of what this means for autistic play in schools, personal and professional values that align with behaviourism (and the 'principles of behaviour') among teachers may contribute to the

attempted suppression of autistic expression through coercion and compliance resulting in the harm to mental health and emotional wellbeing that stem from Lovaas' work and ABA interventions (Williams, 2018). Coercion and compliance are potentially responses to a need for control over the child and their activities, which means that any child displaying uncontrolled/uncontrollable play behaviours could be susceptible to such intervention. In an autistic play culture, the activities and games played are qualitatively different to non-autistic peers, and

> Play with objects might be chosen over social play with other people… Pretend play could perhaps seem more literal or appear on the surface to be less creative than neurotypical… may involve high levels of pattern recognition… attention to routine and order… An autistic culture of collecting, sorting and arranging objects… participating in repetitive self-stimulatory (or 'stimming') actions… and although this type of play is frequently enjoyed by all children, the difference often comes down to the pace, frequency or intensity of the activities which can make them stand out from the crowd.
>
> Guthrie Stirling, 2025a, pp. 128/129/130

This suggests that the activities that are less welcomed by teachers, the uncontrolled/uncontrollable play, are exactly the type of play that autistic children thrive on. Furthermore, it may even be the case that teachers do not perceive these uncontrolled activities to even be 'play' as they know it, as indicated by this in-app feedback from one respondent:



[IMAGE 14: IN-APP PARTICIPANT FEEDBACK]

6. Discussion: Key ideas, entanglement, and assemblage

i. "..although I would welcome almost all of the activities... I would not describe as play" – 'play' / 'not play'

What a fantastic way to start the discussion, with an example of raw unfiltered feedback from a teacher participant who was bold enough to tell me that they disagreed with my interpretation of these video provocations as play. I wholeheartedly appreciated that candour, and it is the epitome of what this research is about! Survey respondents did not have the categorisations of play when viewing the videos so, although engaging with the results through the visualisation we can see what each video clip was categorised as in terms of play types, teacher participants would not necessarily know what each

provocation was demonstrating beyond their own interpretation of the activity. The participant information told them that they would be watching videos of children at play. This participant felt strongly enough that these were not all play, per se, that they chose to reach out in the form of using the in-app feedback form. However this was not a critique, necessarily, because the feedback awarded four stars out of a possible five, and noted the 'interesting' way of conducting the research. This suggests a positive reception overall. The participant was reflecting critically on the survey and provided a lovely nugget of food for thought, and that is a valuable taking off point for the final chapter of the thesis. While we cannot know for absolute certain which of the activities the participant in question would have deemed 'not play', due to the anonymous nature of the in-app survey, it could potentially follow that the activities receiving the lowest levels of agreement or the highest levels of disagreement overall might come into the 'not play' judgement. It might also follow, based on the literature, that two of the activities in particular might automatically be deemed 'not play' because they fall under the categories of 'unoccupied' and 'onlooker' activities – which Rubin, Watson and Jambor (1978) describe as 'behaviours' rather than types of play, with Parten noting in 1933 that "idly sitting and idly looking were gradually given up for more active pursuits at later stages" (p. 143), and were excluded from the other categories for this reason. I had, however, included these rejected types of play out of respect for Parten's original classifications. Gladly this sparks an interesting conversation about 'play' and 'not play' in relation to teachers' attitudes.

'Play' and 'not play' are often different depending on who is observing or experiencing the activity – the adult or the child, for example – according to McInnes (2019). Goodhall

and Atkinson (2017) note that for children: freedom to move; being outdoors; being on the floor; having time in the interest corner; engaging with toys; not being required to be quiet; as well as experiencing positive affect are all important indicators of play. Children are

> more likely to define an activity as play if it involved experiencing a sense of enjoyment, fun and happiness, evidenced by laughter and smiling
>
> (Goodhall & Atkinson, 2017, p. 1700)

Anything outside of these experiences, especially those requiring stillness or sitting at tables or using paper, books and writing equipment, are considered to be work activities by most children, according to Goodhall and Atkinson (2017). It would be ableist and discriminatory however to assume that all children have the same play preferences, and autistic children's play is often

> seen as problematic and challenging behaviour, or simply interpreted as 'not play' is because play itself is usually seen through a non-autistic (or neurotypical) lens.
>
> (Guthrie Stirling, 2025a, p. 127)

In autistic play culture, play with objects is often be chosen over play with peers, pretend play often seems more literal or appears less creative than neurotypical peers (but may be deeply imaginative to the autistic individual themselves) and self-stimulatory behaviour or stimming can be deeply enjoyable despite being seen by others as pointless or interfering (Guthrie Stirling, 2025a).

Regardless of neurotype, disability or difference, as indicated in the literature chapter, Howard and McInnes (2013) implore school staff to make a concerted effort to ensure that choice, control, and freedom in play for children are maintained at all times. It

seems that autonomy and intrinsic motivation are key features of what children perceive to be play as opposed to work at school (Wainwright, Goodway, Whitehead, Williams & Kirk, 2020). Polgar (1976) contends that the difference between play and work equates to the difference between the *means* and the *ends* of an activity, with one being an authority-enforced and structured endeavour and the other being the spontaneous development of novel solutions and connectivity. In a posthumanist sense we could elaborate on this to consider that connectivity to not simply be social connectivity, but potentially rhizomatic connectivity and entanglement. But we shall come back to that. How do we know what *teachers* traditionally think of as play or not play, in the context of schools? Perhaps we can begin by contrasting pupil motivations with teachers', where

> For children... play is not highly concerned with ends; it is a means, interesting in itself, in its ritual and in its variety... From the teachers' point of view play [is] involved with ends: to teach...
>
> (Polgar, 1976, p. 270)

Polgar (1976) points out that the argument is not necessarily that ends-related activities for learning should not be welcomed in the classroom, but simply that means-based activities for play should be considered as important in its own right. By this distinction, means-based activities would include "idly sitting and idly looking" in terms of Parten's categories of play because they are activities based on individual interests and motivations that have no 'ulterior result' as per Dewey's (1944) description of play (Polgar, 1976). From the child's perspective,

> approaching an activity as play, children control the direction and outcome of their actions, and this autonomy and independence increases confidence and esteem...
>
> (Howard & McInnes, 2012, p. 740)

Adults, on the other hand, often perceive their role in play situations to be intervening to direct the activity towards their own ideas for the activities' optimal outcome, which potentially could result in children being more easily distracted, uttering more negative vocalisations and limiting their physical engagement with activities, for example. In Howard and McInnes' (2012) study, the children perceived the latter to be 'not play'. Few studies have directly compared and contrasted adult perspectives of play with children's using the same methods, according to McInnes (2019), and as such practitioners in play situations are often unaware of the children's views on what play is or is not. Potentially, choosing to heed play doctrine from policies and dominant discourses is less confusing for adults than the fear of reneging control during free play, and even being perceived as being in the company of a non-playful adult presence is enough for children to deem an activity to not be play (McInnes, 2019). Teachers should become aware of this and create more opportunities to be playful in their practice, according to Wainwright et al. (2020). This reflects Willow's view in her interview that engaging in play is about having fun with pupils instead of being held back by boundaries enforced by policy or discourse, doing what makes the children happy, letting them lead rather than trying to lead them. She also noted that teachers can hesitate to let go of the reins and relinquish control during play, but in contrast to this Cherry had pointed out that sometimes teachers embrace shifting the locus of control to the children but local authority scrutiny might lead to 'allowing' less freedom in play instead of more. It would seem then, that either way whether hesitant to let go or happy to embrace this shift, policy and discourse can have a negative impact on teacher perceptions of what play is or should be in class.

Circling back to the feedback left by the participant where they stated

> although I would welcome almost all of the activities in the clips, there were several that I would not describe as play.

I begin to focus now on the 'almost all' part of this reflection. It interests me that although all provocations are intended to demonstrate play, 'almost all' being welcome suggests that the ones that are not welcome are perhaps connected to the ones that are not considered by this participant to be play. Although responses are anonymous, non-identifying data such as date and time are collected during the survey and as this particular participant was the only one to respond that day it would be possible to make a strong case for the responses for this participant to indicate that the perceived 'not play' activities are technology-based (both group and solitary), unoccupied, and solitary problem solving. Onlooker, however, was welcomed as this participant did not appear to be one of the respondents to disagree with this activity being welcomed. Other than these three types of activity, all other categories and features of play were strongly welcomed by this participant. Using this participant's strength of feeling about these activities, alongside the overall results in the previous chapter, I could potentially postulate that teachers are concerned about a perceived lack of normalised boundaries and expectations of what play is or should be. Using the example from that last chapter of hula hooping as a potential crossover activity between functional play and games with rules, this could be considered potential evidence of this concern. Arguably, hula hooping could be considered a physical activity using large movements, but it has a set of rules and assumptions that co-exist with hula hoop play. This sets it apart from other activities that have been less welcomed by teachers in the survey which are less likely to be accompanied by such boundaries. Other physical activities that have large

physical movements (and could be seen as requiring risk assessments by teachers in terms of safety and space, as per the concerns raised by Cherry in her interview) but also have rules, were much more welcome by teachers than the unstructured physical play by comparison. Furthermore, unstructured activities that included tinkering or playing with non-standard equipment, and digital or technology-based activities were also rejected by respondents more than other types of play. The video demonstrating unoccupied play was largely unwelcome, and on the whole there was very little agreement that onlooker play would be welcomed (although the example participant who gave feedback did strongly agree with this type of play despite categorising other types as 'not play').

What does this tell us about teachers attitudes towards play in the context of authentic autistic play? Potentially, although an argument has already been made in earlier chapters for rejecting an 'ages and stages' approach to play in order to embrace autistic play culture, the results of this study perhaps begin to inform us about teachers' perceptions of 'play' / 'not play' in this context. In other words, as well as rejecting dominant discourses about 'age appropriate' and 'developmentally appropriate' play, should we also be considering whether 'play' and 'not play' look different in an autistic play culture? In a book chapter about authentic autistic play I indicated that, as a child, I would pick decorative diamantes from resources in the dressing up box instead of play with the accessories in a 'typical' fashion, but

> It was simply play, to me, pure unadulterated, uninterrupted, unfettered play. No matter how 'atypical' it may seem or sound to other people, it was simply my own autistic play.
>
> (Guthrie Stirling, In Press)

Play cannot be placed on a normative scale for autistic children, and the dominant discourses that have sought to normalise or extinguish their natural proclivities towards play should be resisted. In another book chapter, I discuss the idea of autistic play preferences being notably different from neurotypical play preferences such as side-by-side play, high levels of pattern recognition, or reenactments. Expanding further on this, there is an "autistic culture of collecting, sorting and arranging objects, which often bring great joy to autistic individuals" (Guthrie Stirling, 2025a, p. 129) and "stimming can often be considered by autistic children as a preferred type of play" (p. 130) which may differ from the preferences of non-autistic children. Such collecting, sorting and arranging objects, as well as self-stimulatory (stimming) behaviours, may be part of the cohort of activities that teachers consider to be 'not play' within this study. When teachers deem certain activities as 'not play', it raises concerns over the lack of autonomy, and autistic adults when consulted by Gibson, Pritchard and De Lemos (2021) warned against cajoling autistic children's behaviour out of them in an attempt to create a version of play that is deemed more favourable. The concept of 'not play' is not unique to the play autistic children, as indicated by Rubin, Watson and Jambor (1978) when dismissing previously established play types (considering Onlooker and Unoccupied play behaviours unimportant), and Howard and McInnes (2012) when establishing the different perceptions of what constitutes play to children and adults. However, within the context of this research, the concept of 'not play' as a phenomenon in exploring autistic play can be established as an interpretive dissonance between non-autistic adults and autistic children as indicated by Guthrie Stirling (2025b). Peach's recollection of the child who loved Lego and his wish to play regularly with it (but school leaders disallowed this and cajoled it out of him) was a good example of

this, and Peach felt quite certain that shifting this view to one of acceptance could be a potential benefit of the professional learning programme in this study. Peach suggested that video survey as the first step of critically reflecting on one's own attitudes and perceptions could be valuable as an introductory tool for teachers wishing to embrace a shift in this view. Moving forward through the discussion, the key ideas raised through the interviews can shape the potential impact of the professional learning programme on authentic autistic play in Scottish schools. These key ideas are illustrated in a visual provocation on the webpage for research results (which can be found in the list at the beginning of the thesis).

ii. Culture, Mindset and Perspective

Peach, in her interview, highlighted that she believes there is an indirect impact on inclusion if the leadership team are not practicing what they are preaching and that she knew people who had felt unsupported in developing inclusive practice and went without help from the leadership team. Peach went on to say that culture is 'huge', and although she had learned to critique and question systems and policies, not everyone was aware not to take things at face value, and she felt that the whole teaching culture needs to understand this. She had been viewed negatively in the past for questioning and pushing boundaries, but she felt that this came back to the culture of the school and local authority. This culture has to change, according to Peach, meaning how they go about inclusion should be evolving instead of doing things because "it was done like that for years" and she critiqued her experiences of 'passed down' information having negative consequences on neurodiverse experiences in the classroom. Cherry also felt that there are some practitioners set in their ways who would like to see things done the

way it has always been done, but they need to evolve. Peach indicated that she herself had managed to change the culture within her class at least, through modelling inclusion through neuroaffirmative attitudes, by addressing biases and preconceived ideas and refusing to take things at face value. She pondered whether perhaps if teachers understood the challenges better, they would be able to adapt their practice on a wider basis. Willow, too, felt that this was something that needed to be worked on and appreciated throughout the school and local authority culture. On the whole, teachers can be hesitant to let go of the reins and relinquish control but they can begin to change the culture by letting pupils take control of their learning experiences at an individual pace and in a way that's relevant to them. This could be the answer to allowing opportunities for authentic play, according to Willow, by changing the mindset, bringing the whole staff team on board with this. She was critical of the set topics for learning that permeated the school curriculum even within a specialist provision, and was encouraging staff to begin considering ways to tackle these themes while prioritising play based on the pupils' own preferences. Similarly, Peach indicated that teachers benefit from being skilful in order to do things in a way not established by norms of practice and this came down to a shift in mindset in order to break the mould of what has been seen as the done thing. I suggested to Peach that was allowing herself to change her mindset so that the child in her anecdote was playing and learning in a way that was in line with his preferences.

Jacaranda noted her own shift in mindset from previously considering changing how the child accesses play, to changing her perspective and adapting the environment to suit, and indicated that she gives pupils more space for autonomy, relinquishing control over

play opportunities in lessons. She reflected that prior to participating in the professional learning programme she would have been mindful of the need to include autistic learners in play, but she now focuses on taking their lead in play and supporting them to develop play that is most enjoyable to them. Willow expressed newfound confidence to develop the mindset of allowing children to have time to play rather than just use it as time out, as well as developing the young people's learning through play, as a result of engaging with the professional learning. She acknowledged that her view was an uncommon one both in her setting and locally, because there is the perception that play is for nursery not school, instead of recognising that play is for everyone. Willow suggested that a training programme, with the latter mentality rather than the former, is required to develop a workforce able to activate systemic change where ASN is prioritised and play is valued. Willow felt that if more people could become more confident through practice, it would lead to a shared mindset of allowing children to develop their own authentic sense of play, as opposed to what was currently happening with different evidence bases creating different attitudes and resulting in different scenarios around play in schools. Cherry noted that it was difficult to create a shared mindset or play culture in schools when leaders from within the local authority were just as conflicted and contradictory in their views, and she had concerns that diverging perspectives on what play should be like in schools would create a barrier to inclusion. For Willow, ASN in play felt like an afterthought to leaders, but if the wider mindset were to change then ASN staff could be part of play strategy and have a positive impact on inclusion as a result. By planning this way from the beginning, different perspectives could be included from the ground up for inclusive play practices. This might be achieved through establishing a framework for that change in mindset, taking on these

perspectives, with access to the resources and evidence such as an online resource, an in-person programme, or a government strategy across Scotland. Creating a programme that actively focuses on building this mindset as opposed to offering a 'how to' of inclusive play could be the way forward. In our discussion, Jacaranda and I also shared some emergent ideas around the app's potential as a springboard for more widespread engagement with the professional learning programme and beyond. Peach applauded the aims of this research in trying to convey that into the mainstream discourse of play and inclusion, and looked forward to engaging further in this. Based on what Cherry had taken from the app, she considered widespread improvement of play settings to be a priority, noting that the benefits would not just be for autistic children but all children. She suspected, unfortunately, that the contradictory attitudes she referred to from local authority managers could potentially pose a barrier to universal implementation of the mindset-shifting framework presented in the professional learning programme.

This presents to me as a 'Catch-22' situation – the professional learning programme could activate a more inclusive teacher culture and shift set mindsets in the context of play in Scotland, but competing and contradictory perspectives in an already established culture may impede widespread acceptance of the framework. In spite of this, the participants felt that the vocabulary, terminology, and alternative discourses offered within the professional learning programme would potentially go a long way in achieving this.

iii. Language and Justification

Jacaranda and I had engaged on social media following her participation in the pilot professional learning programme, but prior to her interview, with both of us keen on opening up dialogue about ASN and inclusion in Scotland on a wider platforms. We already knew that we both had an interest in neuroaffirmative terminology and the importance of sharing language that opposed ableist and discriminatory terms of the past and present. Jacaranda expressed that, even with her years of experience as an ASN specialist, following the professional learning programme she felt more empowered to make changes to her vocabulary and 'better equipped' to explain her play provision thanks to the programme giving her the language to do so. As better informed professionals, more confident in using inclusive language and the ability to justify the need for change, teachers can have more confidence to justify the importance of authentic play experiences according to Jacaranda. Similarly, Willow shared that language in particular is important to her because she felt that there is a need to be clear and consistent as well as having the lexical tools to put new information into practice. She noted that she had always valued the importance of play and inclusion, but the professional learning programme had given her the confidence to become more vocal in her explanations of what she is doing and why. It was also clear that the app provided Cherry with the language she needed to be able to label the play she was observing which was a critical moment for her own reflections, knowing that she was understanding the content of the professional learning programme and had recognised what these terms were describing in terms of her own practice. She expressed that it changed her thoughts on what play looks like, musing that she thought "oh, that is what that's called, and yes we do that!"

Peach, as explained before, had not participated in the professional learning programme yet due to her own circumstances. Yet, she reflected that her understanding of the impact of the language we use around and about autistic pupils had changed with her growing awareness of neuroaffirmative practice and modelling inclusive behaviours. She was keen to see how the professional learning programme could develop this further, and pointed out that her understanding of the research was to highlight what is beneficial and positive for the child, using inclusive vocabulary to relay that into mainstream discourse for people who are working with autistic pupils so they can practice in ways that are no longer 'to their detriment.' Even for those who are trying to practice in more inclusive ways and embrace neuroaffirmative discourses, Willow pointed out that everyone appears to be using different terminologies and it is hard to pull that together to create a shared vision for authentic autistic play. We discussed the opportunity to have a national hub of sorts, where local authorities, individual teachers, and other practitioners, could share terminology, vocabulary and language, and Willow suggested pooling that together into some sort of database for sharing with other professionals. She noted that the app could start to open up discussions with other professionals and professional learning could be developed further with a wider dialogue, potentially across the whole of Scotland.

During our discussion, Jacaranda and I had been sharing examples of practice that we have found questionable and naturally began justifying through our dialogue why we felt certain issues to be contentious, having both navigated a shared vocabulary of inclusive and neuroaffirmative language. Jacaranda highlighted that it had previously felt difficult

to justify why it was important to change how we see play for all our learners, but with the language provided by the professional learning programme, this became much easier and she expressed that she was looking forward to advocating for change for autistic learners, challenging what she and others were doing moving on. I had also queried this with Willow, incidentally, asking if she felt that she was having to use this new, specific language to justify her motives to either herself or to others and she concluded that it was both. In my own anecdotal account in my conversation with Willow, I pointed out that another aspect that helped me feel confident in justifying my practice to colleagues was having the support of a line manager who shared this inclusive perspective with me. Peach, on the other hand, noted that a number of teachers had reported having issues with management either being unable or unwilling to support this perspective and they felt unable to justify their actions. It seemed that the knowledge and understanding, required perhaps for this perspective to have taken hold, was lacking.

iv. Knowledge and Understanding

Peach expressed frustration that, although many professionals have not (or are yet to) participate in any professional learning like this, gaining the knowledge alone should be enough to make a positive change around autistic play and so it should be a simple solution. I wondered what Peach imagined the app and the professional learning programme could provide for her in this sense, and she indicated that she expected to learn about what play would look like and how neurodivergent pupils could present in class. She expressed an interest in knowing more about this so that if she saw this

different kind of play in her classroom she could be less likely to intervene in stopping it, as she may have done in the past due to the dominant discourses of play in schools. Peach felt that, without the knowledge of the learning content offered in the app, she wonders what everyone is even doing about it meeting these pupils' needs. She acknowledged that there may be working parties for play in schools, but they are not specifically about or geared towards children who may not play in the ways expected of them. She pointed out that it begs the question of what teachers are actually doing to support these during play, or when they become dysregulated in class without the appropriate knowledge and understanding of actual support needs on a day to day basis to allow them to feel comfortable in class. For Peach, her own goal was to become more knowledgeable about autistic play in general, and then engage in self-reflection to find a better for her pupils by changing simple things individual to that child.

In a similar vein, Jacaranda reflected that, prior to taking part in the professional learning programme, as an established ASN specialist teacher she would definitely have aimed to include autistic learners in class play. However, since participating, she feels she now possessed a deeper ambition of letting them take the lead in their own play and supporting them to develop play that is most enjoyable to them. Jacaranda established that this was as a result of the gaining a deeper understanding of autistic play from the professional learning programme, and building this into the knowledge and experience that she already had as an ASN teacher. She emphasised that her practice has moved beyond what it was before, with the added recognition that autistic

play culture may look different, but her role in that is as a supporter of that play rather than leading the direction of the play for them.

Willow, having expressed feeling quite isolated in her perspective within her setting, she had an aspiration to build a network of interested colleagues to all engage with the same knowledge base, using the same evidence, and postulated that they could begin within the workplace and develop it further throughout and beyond the school. She had concerns, however, that even with this shared knowledge and understanding, it might not be enough to achieve widespread acceptance of this perspective. She shared that, potentially, even knowing the importance of authentic autistic play teachers could still get caught up in all the things they 'should' be doing despite having the knowledge and understanding to make the change they wanted to make. Musing about whether or not a wider collaborative, rather than just on a school or local authority level, could better enable evidence sharing and exchanges of knowledge, skills and best practice, Willow felt that collegiate working and information sharing could accompany data and information gathering to look into what might be working best and what strategies people are using that work well in this context. Regarding the knowledge and understanding gained through the evidence currently available, Willow considered early years guidance and collegiate working to be of benefit to everyone but noted the irreconcilable differences between early years contexts and ASN. She admitted that a crossover from discrete or disparate sources of knowledge and understanding could create a lot of confusion and potentially it might have a negative effect on the secondary ASN cohort. Instead the search for such help or support is the difficult part for Willow, because she has found that, even if there are working groups or networks created that

look at play-based-learning and develop new ideas through sharing evidence and experiences, no equivalent knowledge base quite like the app currently exists that teachers can turn to for suitable evidence. If it was possible to develop that as a systemic foundation for knowledge and as an evidence base around authentic autistic play, more teachers and practitioners would know where to go for support and reach out to ask for help.

Peach divulged that this 'understanding' is what she found most interesting in her own learning journey as a professional. Acknowledging that it is important to critique what we are told as professionals, and what practice may have been in the past, Peach supposed that teachers could start to recognise that what is happening in schools may not necessarily be what the most up-to-date research or evidence indicates should be happening instead. This knowledge and understanding could prevent detrimental experiences for autistic pupils, Peach felt, and allow teachers to practice in a way that is more beneficial to the children.

Cherry indicated that her own personal preference for learning about the required knowledge and understanding in the future would be at the 'sector leading' (in her eyes) local primary ASN provision, where she believed that the current leader had implemented an entirely new curriculum that best met the pupils' needs for individualised learning through play in their own way. She implied that he had brought new knowledge and understanding from outside the local authority when he started at the school and used this to develop a new approach to providing opportunities for play inside and outside of the classroom. This was a positive example to provide, and it was

a welcomed anecdote about sharing best practice through enhanced knowledge and understanding. As noted previously, however, Willow had indicated prior to her interview that she had run the unit in question before moving to her current secondary setting, and these examples given by Cherry were quite similar to the examples of best practice from Willow's interview which potentially suggests that this approach had been established in the primary ASN unit by Willow prior to relocating. Regardless of who initiated such an approach, it is a positive example of inclusive practice that Cherry admired and aspired to learn from in the future.

Willow, Peach and Jacaranda all indicated that their preferred source of knowledge and understanding in this area of interest would be to engage further in the professional learning programme provided by the app or to contact me directly to ask any follow up questions or signposting to further information. They were all made aware of the 'recommended resources' section of the research website, where there are links to conference presentations, book suggestions with introductions to autistic play, videos about ableism and autistic joy, downloadable leaflets about the theory, and links to organisations with similar discourses to the frameworks and ideas presented in this research. Peach in particular was grateful for this, having yet to participate in the professional learning programme, and highlighted that it was good to pool these resources together in one place. Jacaranda indicated that reaching out to me would feel intuitive as a mechanism for her to seek support and advice, expressing the opinion that I am knowledgeable and approachable, and that she had already felt I had supported her well since doing the professional learning programme over a year prior. She wrote later that she thought the 'community of understanding' that the programme had

afforded her would be beneficial in her learning journey going forward. Talking about the subject with others who knew the content of the professional learning modules too, as well as being armed with the recommended literature, was of vital importance to Jacaranda for ensuring play is appreciated and valued in all its forms across the board. She expressed a desire to make use of the app to better her knowledge and understanding, having not yet been involved in the professional learning programme through the in-app modules as she was an in-person participant for the pilot session. Doing so alongside other professionals wishing to participate could help build that community of understanding Jacaranda referred to, creating more widespread consistency and shared confidence in taking authentic autistic play forward.

v. Confidence and Consistency

Willow suggested that access to the resources and evidence such as those within the professional learning programme could essentially create the consistency needed. Having a mix of online resources, an in-person programme, and perhaps a government strategy, could maximise this consistency across Scotland, with further practical observation and collegiate discussions being considered important to get something 'more solid and concrete' in place as a harmonious approach. Willow felt that secondary ASN provision was already disjointed, and anything made available to teachers and headteachers should also be available to support staff. Second hand information being passed down becomes diluted and too open to interpretation, in Willow's view. I shared the example of play based curricula having different names, particularly in secondary ASN provision, and noted that not knowing what it is being

labelled in different places means it becomes very difficult to gather information about what is happening in play across ASN schools never mind establish a consistent approach.

Jacaranda reflected that, since participating in the programme, she has engaged more assertively in conversations with colleagues about authentic autistic play and she has noticed that pupils seem more receptive around her during play. Having the newfound confidence to embrace this more openly, she reports witnessing play opportunities which may have otherwise been 'redirected' or 'told off' by other staff, and vocalising her overt approval of their novel play. Noting some 'tricky' moments with some colleagues where they have not understood this approach and dismissed play preferences, Jacaranda felt equipped to navigate these moments with more confidence in emphasising the importance of authentic play experiences.

Peach, during her interview, briefly mentioned the importance of confidence from the people who deliver professional learning on play and inclusion, in the sense of creating a level of certainty in the attendees or at least feel comfortable in asking questions if they are uncertain in any way. Breaking the mould of what is commonly assumed to be the way to approach autistic pupils' learning might potentially come from a more widespread and consistent understanding of authentic inclusive education, but Peach was not yet at a level of confidence in confirming this notion. She personally felt that she had enough confidence in her abilities as a teacher to make positive change for autistic children, but in order to feel certain in her own inclusive strategies she would need to learn about this more through a programme like the one on the app.

Cherry confessed that she felt unsure about what attitudes might pose a barrier to embracing the framework presented in the programme because of the level of inconsistency she had experienced in her various settings, she was unsure what to believe. This may well be the case for others in the absence of a consistent message, as Cherry pointed out how this inconsistency had led to her colleagues also having doubts about what types of play should be welcomed in the mainstream classroom. She personally felt conflicted, not knowing who to believe between the two inspectors who visited her school, questioning how two professionals within the same role could have such inconsistent advice in the same context. Cherry confirmed that if she could find any possible way round this, it would be to ensure there was a consistent message across the board, with all professionals being on the same page, instead of conflicting messages.

Jacaranda likewise had noted that, in order to avoid such inconsistency in the field, she intended to keep in touch with myself and others in the 'community of understanding' she mentioned, to continue to clarify things and make sure we were all working along the same lines. She expressed a wish to share those practices more widely, once this consistency was established, and begin working together to make that positive change for autistic pupils in Scottish schools.

Taking authentic autistic play forward as a priority, with local champions, wider networks and potentially a national strategy could lead to consistent practice and confidence-building, according to Willow, and the professional learning programme

could feed into that so that everyone would be 'singing from the same hymn sheet'. Reassurance and success stories from others could potentially help with this, because teachers often feel stuck and uncertain about what to do. Having others 'in the same boat' to identify, share ideas, or cogitate the stuck feelings with can potentially start with the app as a mutual 'jumping off point' and develop into local and then national discussions, and the confidence and consistency could follow on from this. Although Willow's views on ASN remained unchanged after the professional learning programme, having already been quite well versed in such things, she did express a newfound confidence as a result of the evidence presented in the app giving her a greater sense of her own ability to be vocal about the importance of inclusive play (particularly in her new role in a different setting). She praised the app's ability to provide teachers with the tools to become clear, confident, and consistent in their application of the information provided by the literature evidence. Willow shared that often teachers get asked questions about what they are doing with what others may seen as free time or dead time, and that a lot of the confidence gained from the programme was about being able to clarify what they are doing and why it is important because not every adult working with children and young people sees the 'necessity' for play. Willow voiced her appreciation of having the backup from some research and information from the professional learning to encourage allow others to see the importance of authentic play and potentially follow suit.

vi. Relationships, Empathy and Support

Part of the importance of adults seeing the necessity for authentic play is for them to develop genuine relationships through empathy and support, it would seem. Jacaranda

was confident that she has always been an advocate for many neurodivergent pupils, but thanks to the professional learning programme she felt more able to build on her empathy and rapport with them to engage in better advocacy for autistic pupils. Change can be hard to make, Jacaranda contended, but the embracing autistic play series helped her reach several children with their play and learning journeys more easily. She believes that the more we can sympathise with and develop an empathy for our pupils, the more likely it is that meaningful change can and will happen. Peach specifically identified relationships as being key to inclusion, establishing that her primary goal would be to make pupils feel safe, secure and happy in her classroom. She felt that she can already empathise and be compassionate towards the pupils who are struggling, and that she relishes building a rapport with them. Sometimes a more genuine ability to empathise with autistic individuals stems from a natural affinity between similar neurotypes and at other times this needs to be developed consciously through raised awareness and professional learning (Guthrie Stirling, 2025b) but either way "having an understanding of the state of mind behind autistic play may go some way in improving…outcomes" (p. 283). Peach admitted feeling held back by the lack of information she on neurodiversity and its impact on learning, habits and emotions in order to further the relationship through empathy and support, although the app may be useful in addressing this in the future. Similarly, Cherry pointed out that the professional learning programme had impacted her on both a personal and professional level as it highlighted to her the importance of building relationships, recognising pupils' preferred play and providing them with opportunities to explore this play. Peach noted that support for neurodivergent pupils, particularly when they are dysregulated in class was variable at best and often lacked empathetic approaches. For example, taking them out

of class to avoid dysregulation also simultaneously takes them away from the environment where their peers are getting to play, so they lose the opportunity to socialise and have fun with friends, and Peach emphasised that socialisation is what play is all about for many children. Peach anecdote referenced a child that gets taken out of class until they calm down, but admitted that her gut feeling would be that this is not a positive approach, because all this does is take the child away from their play rather than dealing with the 'triggers' that cause the dysregulation in the first place. We discussed whether "prevention rather than cure" would be a better option, which Peach agreed seemed to be the case but had no current strategies for this. She added that time pressures and staffing issues were leaving teachers in 'turmoil' over supporting children with additional needs, and they were often struggling to implement the planned 'supports' that were suggested by leadership without any additional time or staffing to meet these expectations. Mentioning that she knew of teachers felt that their leadership team left them in the lurch in terms of offering vital support, Peach indicated that this situation leads to too many children struggling in class and teachers feeling more unhappy in their jobs because their attempts at empathetic support for pupils with ASN fell flat without managerial backup. Much of this was echoed by Cherry who noted that additional staffing for supporting inclusive play was vital, but often missing from many mainstream classrooms.

One way round this came from Willow suggesting that teachers go about play as a facilitator rather than try to manage the play and take control from the sidelines. Facilitating and joining in with the play rather than assuming the role of 'teacher' from the 'fringes' of the classroom, which Willow felt was the standard approach, adults are

immersing themselves in play with the pupils, and it was about having fun with them and doing whatever they're comfortable with in a way that they see the teacher as "being fun and being silly" instead of being held back by boundaries, doing what makes them happy, letting them lead rather than trying to lead them. I commented that this would mean that the boundaries were not just blurred, but in this case they would not exist, allowing the teacher to step into their world and removing barriers to their play. I see that this appears very similar to a flattened hierarchy within an assemble of intra-action, and I remember commenting in a similar way following the interview when our conversation had finished and we were heading out of the meeting room. I thought this seemed like a concept worth exploring further in the context of individual classrooms.

Referring to what Willow had said about doing things 'in your own room', I asked her in the interview about how she seemed to be suggesting an ecosystem of sorts, and no matter how you can try and plan for things in a way that supports the pupils' play, discovery, and curiosity, there would be systemic and wider barriers to this at a school and local authority level that prevented the ultimate levels of support being possible even with the empathy for their individual approaches. Willow intimated that taking small, personalised steps to help pupils feel comfortable and happy in their life in and out of school is a top priority, and had to be prioritised over wider obstacles in policy and practice. She reflected that giving 'set' activities in the past resulted in pupils looking bored and underactive, giving no feedback. Whereas now, she considers her activities more carefully for the young people in her class and she is getting affective feedback and non-verbal communication from pupils, demonstrating their engagement

and involvement, and wanting her to join in with them, which she termed 'the real breakthrough' in her practice and approach to play.

Planning for regulation through play was also an important factor for Willow, and she emphasised that sensory toys for emotional wellbeing should be available to the child or young person at all times, not just when an adult sets aside time for it. Empathising for and supporting emotional and sensory regulation was important not only for learning itself but as preparation for learning so that calm and regulated pupils can be more able to learn. Cherry described one child who loved maps, giving him opportunities to explore globes and atlases in the classroom, and using this to help him stay regulated in class. She went on to say that if autistic children are not regulated they are not learning, and they are not taking in what is being said or done around them. Recognising this was key to Cherry for helping them to learn in a calm, regulated and engaged way on their play journey regardless of age and stage. Cherry believed it was quite easy for her to identify children with ASN, but she now recognised that identifying what might support them best was just as important, acknowledging that this is different for every child and support must be tailored specifically to the individual. Cherry pointed out specifically that, for autistic children, not having sensory experiences was a definite barrier to regulation in class. This appears similar to the discussion with Peach about 'prevention', where empathetic teachers could support regulation *through* play instead of removing them from unsuitable play opportunities why they become dysregulated. Peach made a case for modelling an inclusive attitude towards autistic pupils to prevent them from being 'othered' in class and be more able to participate in all learning activities, not just play. She felt that she was able to understand what neurodivergent children are thinking

and feeling, anticipating what they needed in that moment to feel safe and comfortable in her class, although she was unsure if this made her an 'amazing teacher' but I reassured Peach that empathy for autistic pupils is absolutely key for successful inclusion. She lamented, however, that it became much harder to focus on the same supports through play as the children get older where the curriculum becomes more crowded and class sizes become bigger. Continuing play as a basis for learning throughout their school years might provide ongoing opportunities for empathetic teachers to support autistic pupils, but Peach indicated that this would take a greater deal of professional learning to understand how to do this, and perhaps the app could be a way to do this.

Prior to her engaging with the professional learning programme, the teachers in Cherry's old school collaboratively decided to do seven adult-directed play tasks across the week as well as more free-flow activities, as a result of conflicting advice from council officials about free and structured play. She felt this had worked well at the time, within the expectations placed on them, and supported pupils who had preferences for specific types of play to come and do other activities (having indicated that some children would continuously revisit the same activities). The implication that this was a bad thing or inappropriate in some way was left unexplored in her interview due to her previous hesitation to talk about what she considered to be too much play but Cherry talked instead about an initiative to promote pupil voice on play, potentially as a defence against this position. She elaborated that the teachers gathered pupils' thoughts on play and what they wanted it to look like for them, factoring this into their planning. I believe the staff at Cherry's school were content with this balance and felt it

resolved the predicament that the inspection had left them with regarding the perceived appropriateness of free play. I agree that seeking views from pupils is a good start to building rapport with them and beginning to empathise with them, but I would be keen to know more about what this might look like for children who are less likely or less able to share their views in the manner described at Cherry's school so that they are more able to embrace all types of play through their developing relationships with these young children.

vii. Value, Acceptance and Validation

Peach talked in her interview about feeling comfortable addressing biases and preconceived ideas that pupils had about neurodivergent children, by modelling acceptance and validation of a young boy in class who was deemed 'bad' by peers, the result of which was a more inclusive ethos where he was less othered and more able to participate in learning activities. In another example, Peach recollected a boy who loved playing with Lego every day, and although she felt that this should have been freely allowed, Peach was told by school leadership that he was not allowed to do that, play had to be structured and purposeful. That child has an autism diagnosis now (and therefore one would assume more acceptance of his needs) but he is not engaging with learning because he is no longer allowed to play with Lego to access the curriculum and zones out regularly in class. Peach did wonder if his play had continued would he be more engaged, but felt that teachers still lacked the know how to value the play he used to access. This is similar to an example given by Martin and Milton (2017), where 'Michael' loves doing everything with Lego but the teacher in a sense weaponised his interest as a form of compliance-based control, and as he got older the Lego was taken

away from him, which created increased anxiety and reduced engagement in his social and sensory environment.

As a mainstream teacher, Cherry acknowledged that the app had made her think about the play that she would ordinarily accept in class, finding that she accepted quite a lot of various different ways of playing, with the exception of rough and tumble which she felt this was less appropriate. Cherry reflected that it did cross her mind that she may be too accepting of different types of play but reverted to this acceptance being a good thing. This was in spite of the doubt cast on the 'appropriateness' of free play in early primary classes, following an inspection that gave conflicting guidance on structure and balance, because she recognised that too much structure takes away pupils' freedom to choose. The compromise Cherry and the other teachers went for was a blend of the two, hoping to maximise staff acceptance of play preferences through discussions with the pupils. The app allowed Cherry to accept the non-hierarchical view of play, changing how she specifically would observe and plan moving forward, but this acceptant would not necessarily be shared by other staff who were perhaps not as far along in their play journey as she was. Commenting on limitations set upon the teachers at a school-wide level, Cherry indicated that tables were not allowed to be removed from classrooms in order to make space for a wider repertoire of play experiences – and although it seemed like play was 'allowed' in these classes, by not valuing the importance of play spaces, classroom provision and resources, it was not opening up opportunities for authentic preferred play to occur.

Appreciating play as seen through the child's eyes was a benefit that Jacaranda noted following the professional learning programme, being more able to accept how autistic children may engage in play and value the profound significance that the play holds in the child's life. Notably she accepts that autistic pupils' play preferences are just as valid as other children's play, and although it might be different to what is expected, teachers need to create space for them to engage in this without pressure to conform to neurotypical expectations. She praised the professional learning programme for giving her the 'ammunition' she needed to embrace authentic autistic play and advocate for equality of opportunity to engage in preferred types of play. There have been some challenging situations where staff working with autistic children have refused to accept or value their play preferences, but having appropriate literature to draw upon has allowed Jacaranda to encourage colleagues to take stock of their attitudes. She acknowledged that using the app could really make the most of the literature and resources available to teachers, and would share this with others to help them build the rapport and acceptance required to maximise inclusion for autistic pupils.

Jacaranda explained that she has built this rapport by not taking over in play, and allowing the autistic pupil to lead the play in their own way. She has noticed that many children are much more inclined to develop a trusting relationship with her, and include her in their play. Instead of attempting to develop communication or sensory targets through play, Jacaranda is appreciating their play no matter how different, and takes a step back to play a supporting role rather than a directive one. In building these relationships, she has encountered an increase in seeing 'really cool play' happening which she acknowledges would most likely be dismissed by other staff, and takes every

opportunity to openly validate these episodes of authenticity to both staff and children. Jacaranda aspired to work on creating play opportunities that build on the child's own interests instead of veering them towards a particular style of play but recognised that through professional learning she was now more able to openly accept play preferences, and validating this through the choices that she makes and opportunities that she provides, modelling this acceptance to others.

Willow also recognised that not every adult working with children and young people with additional needs values play, but she appreciated having the information from the app to 'back up' the value that she placed on it, and hopefully encourage colleagues to see its value. Additionally, Willow contended that parents of pupils in her setting really struggled to support a localised acceptance of play, due to it being a secondary provision. Without more widespread acceptance through an official scheme or national endorsement there was always going to be pushback from the parents, according to Willow. The idea of play within a secondary school locus was too jarring for parents, and the longstanding belief that play belongs in the early years prevented them from recognising the value of play regardless of age or stage. Willow would like to open a dialogue with them that their young people are going to be who they are regardless of preconceived ideas about play, and everyone needs to embrace that to give them the acceptance they deserve and build on their individual strengths. Systemic change where ASN is prioritised and play is valued, that supports the workforce to develop their strategies and adapt to individual needs within play through professional learning, is very much needed in her eyes. Willow felt she had always valued the importance of play

and inclusion, but participating in the research had given her an opportunity to become more why authentic play is so important, sharing the value with others.

However, even she has always known the importance of play in ASN, she confessed that she can see why many people get caught up in everything they are told they 'should' be doing instead. The value of play not being recognised makes it less likely to take priority, which she hoped would be a positive change that the professional learning programme could effect. Willow wanted to emphasise that the *actual* value of play and play-based learning could never change, but it was the *perceived* value that potentially could become more recognised, as currently some people just do not see it as worthwhile. This increase in acceptance and effort to value play must be ongoing, according to Willow, she believes it needs to stay at the forefront of people's minds and it needs to be part of regular dialogue for that value to be recognised as an ongoing priority in planning and strategy in the future. Currently, Willow indicated that there was a weakness in planning and strategy for both play and ASN in her local authority because neither was prioritised in the context of the other, and therefore validating play in ASN (and vice versa) was too challenging to achieve alone. As a former manager, she believed that the ASN sector was always forgotten when council initiatives to develop and improve play were organised. She noted that it was almost an afterthought to consult with ASN staff, once it had already been planned and carried out by mainstream colleagues, even though having specialists in the field on board from the start would have strengthened the development of play for all. The acceptance of a convergence between ASN and play was too weak to plan effectively at a higher level for widespread successful inclusion of children with additional needs through play, whether they were in the units

or in mainstream. As a result, professional learning in play and professional learning in ASN were not fully addressing each other, and there was very little crossover in developing council staff's understanding of the two in relation to each other.

In her own isolated circumstances, Willow's answer to this was encouraging opportunities for play to bring the whole class team on board by openly allowing children to benefit their own preferred play and showing that she is valuing their authentic play despite what was currently happening on a wider scale in her setting and local authority. Having the support of school management would hypothetically help with this, according to Willow, but she pointed out that even though they do having someone with a remit for play based learning, it all appeared very tokenistic. Some schools can claim to value play but fail to recognise that if it is not individualised and freely chosen then it is not a good indication that authentic play is genuinely valued in that setting. Willow shared her alternative vision that she would hope to see the young people having play throughout the school day, getting to choose what resources they want to play and learn with, and being able to do activities that are appropriate for them as an individual. This would be a clear indication that play is valued, and preferences are accepted, and a positive sign that children might be more successfully included in classrooms. This could potentially be achieved by thinking outside the box and taking steps to create meaningful change for increased buy-in.

viii. Buy-in, Meaningful Change and Thinking Outside the Box

In terms of buy-in, the vision for this would be widespread acceptance of the value of play from teachers, leaders, parents, support staff, and everyone else who would be

involved in working towards successful inclusion of autistic pupils. Becoming united in practice and approach for authentic autistic play, buy-in could be achieved through professional learning, with Willow suggesting that the app could be launched as a starting point, with further inputs and follow-ups down the line. This would potentially open up dialogue with other professionals and campaigns could be developed further with wider discussions creating a more collegiate approach. Willow in her interview highlighted complex differences between play in early learning and play in ASN settings, noting that if the two attempted to come together for professional learning and planning without a specific shared framework to take play forward, there would be too much confusion and could potentially have a negative effect on shared acceptance among mixed colleagues. Even with the possibility of a hybrid early/primary/secondary network for attempting to create meaningful change in play, with her own school being the only secondary ASN provision in the local authority it would run the risk of being overshadowed by the already established early years play network. For meaningful change to happen, ASN teachers would need to have an equal say in play strategy across the local authority and have opportunities to have their perspectives heard. This positive impact would likely be experienced through all sectors, where children with ASN in mainstream could benefit from a more inclusive approach to play and potentially cope better in those settings if better strategies were in place for all. There would also be the possibility of opening up the app's framework Scotland-wide with local champions taking it forward as a priority, and an opportunity for a national strategy with the app-based programme feeding into that. Willow felt that, if this were possible, everyone would all be 'singing from the same hymn sheet' with regards to autistic play, setting aside time to develop this and keep on top of it.

Cherry was conscious that creating buy-in through this consistent message felt like a job too big for one person, and it was not something she felt able to do on her own. Despite her perceived limitations in terms of authority, she expressed a wish for those in power to prioritise improving play settings everywhere, not just in her school, and recognised the universal benefits of better play provision for all children not just autistic children. She also indicated a belief that additional staffing and resources to support universal play were essential and should not be a postcode lottery. She acknowledged that, thanks to the professional learning programme, she felt more comfortable moving forward with a change of perspective that allowed her to think differently about play types and what is 'allowed' in classrooms. She felt frustrated that there were inconsistent messages being promoted by senior council officials, contending that they need to evolve as education is always evolving, and Cherry believes there is no point in professionals refusing to change the status quo simply because they are used to something being done in another way.

Likewise, Peach suggested that there is a kind of uniformity in education where things are done a certain way because that is how it has been done by everyone else for a number of years, but teaching should be a job that is ever-evolving and this can be done by taking simple steps to change their practice. One of these steps to evolve would include questioning policies and pushing boundaries, rather than ignorantly conforming to the status quo. In the pilot programme, participants expressed a level of discomfort in realising that their practice in the past may have been detrimental for some pupils, but all participants expressed that by the end of the programme they were feeling uplifted

and empowered to make meaningful change around autistic play and inclusion. However, Peach felt it was unfortunate that no matter how much individual teachers go the extra mile to be inclusive, they will often come up against systemic barriers and in the face of unsupportive leadership it is unlikely that the status quo will change. Without wider buy-in, challenges would always be faced in terms of staffing issues, time pressures, and other logistical issues out of an individual teacher's control.

Buy-in on a smaller scale stemming from individual efforts appears to be a possibility however since Jacaranda's personal and professional advocacy (sparked by a renewed inspiration and enthusiasm following the professional learning programme) has been warmly welcomed on the whole with many schools responding positively to the opportunity to learn new things from her. Jacaranda and I talked at length about trying to, or having to, think outside the box with confidence in making adaptations to the curriculum, the environment and our attitudes towards natural play experiences. Peach commented too that the ability to adapt might come more readily when armed with better information about meeting autistic learners' needs. My own efforts as a professional and on a more personal level, as discussed throughout many of the interviews, have also had a clear impact on others including inspiring Peach to reach out despite not meeting interview criteria. I explained to Peach at the time that I tried not to be transmissive in sharing the material, or claim to be an expert of any kind, because I felt it was important that everyone brought along their own experiences, their own backgrounds, to the professional learning programme. I see my role as that of a facilitator, I have no intention of building a how-to guide through this research, I want to offer a framework to consider a different way of thinking about autistic play.

Looking at another potential way to effect meaningful change across the board moving forward, for Jacaranda would be to reference the material in the professional learning programme and website to channel advocacy more effectively on behalf of autistic pupils, and although she acknowledged that making change happen is definitely challenging, she strongly believed that that the professional learning programme can make meaningful change more likely. She hoped that by challenging herself and others to engage in informed advocacy and change how autistic play is viewed more widely, even through small steps such as researching, reading and discussing autistic play more, it would be possible to chip away at the dominant discourse going forward.

ix. Moving Forward (with Direction, Recognition and Responsibility)

Even though GTCS professional standards require teachers to take responsibility for challenging biases towards children with additional support needs and disabilities, and knowing their duties around this, it still took me somewhat by surprise that Peach shared that she felt this responsibility deeply. It was more than just a professional obligation, it was a moral one, and one that many teachers did not recognise in Peach's eyes. This was a reason we agreed the professional learning programme was important, to raise awareness of how this specific obligation could potentially be actualised through play. Not everyone recognises that what they are doing may be causing issues instead of resolving them, and participants often feel a sense of discomfort when they realise this. A mantra of mine that I shared with Peach had previously helped me more forgiving to myself when I had to unlearn the dominant discourses, was "you don't know what you don't know" and this could help settle the unease that appears to accompany

the recognition of detrimental practices. Peach says teachers can often dismiss 'unofficial' information in the first instance but then they start to recognise it as the best way forward, and once they know that Peach feels that essentially they have to follow through on that. This responsibility that Peach mentioned spoke to the aims of the research, but took my awareness of this to a deeper level, because although pilot participants indicated an awareness of feeling empowered to change, they had not raised the concept of any obligation (professional or moral) to do so moving forward.

In terms of moving forward with a sense of responsibility, Cherry recognised that identifying exactly what kind of support might suit a pupil best was just as necessary as identifying what additional needs a child has. Cherry added that she could easily pinpoint children who have ASN but she now acknowledged a greater obligation to determine their support needs whether or not they had a specific diagnosis, because these are different for every child and support must be tailored specifically. This realisation was a direct result of participating in the programme and she mentioned the impact of the critical questions in the app making her think this through. For Jacaranda, the professional learning programme gave her a sense of direction for channelling this responsibility she felt. Although she has always intuitively felt this call to action in terms of advocacy and activism on behalf of autistic pupils Jacaranda said the professional learning programme has given her a new way to look at this action as a facilitator and supporter of play rather than a leader of play. The sense of direction that she gained from the pilot programme was leaning towards modelling this behaviour for others and opening up the dialogue on what play is or can be. Jacaranda had mentioned about feeling empowered to take this challenge on, using the language and evidence base to

justify why it was important to change how we see play moving forward. She was looking forward to a future of advocating for change for autistic learners, being more confident in challenging what she and others were doing moving on, and she had specific ideas about how to go about this now. We are both active on social media as ASN specialists, and Jacaranda wanted to make sure after the pilot programme that we kept in touch through this medium, to maintain an awareness of each other's activities to make sure that we were working along similar lines and keeping some sort of consistency in theory and practice. She wanted to establish a shared vision of theory and practice and work together moving forward to make a positive change for autistic children in Scotland, as well as having an open dialogue about it to contact me if she felt she needed clarity on anything we discussed previously. In her interview, Jacaranda admitted not being aware of any other structures, support systems or resources that were currently available for teachers for this, and suggested that using the app could not only make the most of the literature and resources available to teachers, but also build a 'community of understanding' which she feels will be vital to teachers' learning journeys going forward. Similarly, Peach did not know where else could she go moving forward either. She often found it difficult to open up professional dialogue with colleagues who appear to hold traditional views and are set in their ways. As someone who feels a responsibility to question the status quo and challenge the dominant discourse, she finds it hard to discuss things with teachers who uncritically heed what they are told to do.

Willow said on more than one occasion that she felt there was nothing currently available in terms of structures, support mechanisms, colleagues or other sources of information that might be useful moving forward. Her background in working with

younger children helped for having a baseline for play based learning, but going into her new context in a secondary ASN provision made phrases such as 'age appropriate' and 'developmentally appropriate' seem different now. She appreciated the timing of accessing the professional learning programme, and viewed her experience with the app positively, because it reminded her that play was important regardless of age even though this was not a view that was shared across the whole school. I was grateful for Willow holding me accountable for having failed to acknowledge secondary provisions when I referenced the difference in expectations between nursery and primary schools. She contended that the professional learning programme could have greater impact if it was shared to a wider audience, because although she feels can do it her way in her classroom she believes she would witness more successful inclusion moving forward if authentic play was being developed across the whole school. Taking this to the next level, for an authority-wide and even Scotland-wide expansion of the app and the professional learning programme, Willow believed that there could be a mix of approaches such as a national strategy, online resources, face-to-face learning, practical observation, collegiate discussions, in order to create something 'more solid and concrete' to take this framework forward. She considered the best approach moving forward to be having all the local authorities starting out with the app and having local forums for this, then progressively opening it up culminating with a government-endorsed national strategy for the app and programme to feed into across Scotland. This ultimate direction moving forward could potentially maximise the impact of the professional learning programme on successful inclusion of autistic pupils through the key ideas shared from the interview data.

Part three: Entangling the research

x. Entanglement with the literature

The findings of the research have revealed a number of key ideas around authentic autistic play and inclusion of autistic pupils in Scottish schools, and although there is potentially a lot of crossover between these data constructs, diffractive consideration of these various ideas would create an expectation of entanglement within and throughout the discussion. Culture, mindset and perspective; language and justification; knowledge and understanding; confidence and consistency; relationships, empathy and support; value, acceptance and validation; buy-in, meaningful change and thinking out of the box; and moving forward with direction, recognition and responsibility; have all emerged as key ideas from the data and as entangled as they are with each other they are also entangled with the landscape of the literature from chapter two. This too makes sense, given that the professional learning programme was cultivated from the themes found within the literature, with the additional 'ages and stages of play' content provided to participants to demonstrate the possibilities of rejecting this dominant discourse alongside the traditional views of autism and inclusion found within the programme.

Throughout the literature, and in the professional learning programme, it is proposed that play in general as well as the choices, freedoms and opportunities presented within play provision should be meaningful and personal for children, but teachers and other school staff often interfere with this (Sterman et al., 2020). Play is an activity that spans both UNCRC and Nussbaum's capabilities and even within these established narratives of children's experiences the concept of equality of meaningful play experiences falls short in common education discourse and culture. Play should never have barriers of

lacking choice, opportunity or autonomy (Howard & McInnes, 2013) but it has been established within the literature chapter that children with ASN and autistic children in particular do experience such barriers. Even if autism in schools no longer has quite the same stigma it once had, surface-level acceptance of autistic children at play can be just as damaging, and Paechter (2019) suggests that current practice is a superficial response to the high-pressure obligation schools in Scotland have to include autistic pupils within their setting without knowing how to actually include them. It is recommended that adults become better educated on the nature of free play and the equalities that should accompany this (Casey et al., 2015) and in reading, writing and thinking through the data as a whole there are many indications of this being particularly important for autistic pupils in Scotland. In both mainstream and specialist settings, the teachers who have been interviewed have highlighted a number of ways in which schools are currently failing to create or even allow opportunities for autistic pupils to express themselves authentically through play. Play should be an opportunity available to all children as a basic expectation of their school experiences and as a human right, as indicated in the literature chapter, but the findings of this study suggest that teachers, schools and local authorities in Scotland are failing to get it right for autistic pupils. In Scottish legislation, education must be "directed to the development of the personality, talents and mental and physical abilities" of each child to the fullest extent possible (Scottish Parliament, 2000) and to fail to do so within play provision impedes the pupil's dignity (Hedge & MacKenzie, 2012), creates negative identities and marginalisation (Conn, 2015), breaches their human rights (Eisele & Howard, 2012), and can negatively impact mental health and wellbeing (Bottema-Beutel et al., 2017). Within the interviews, several examples of this being the case were highlighted – such as

Peach's pupil who loved to learn through Lego play but was not allowed to, and Jacaranda's pupil who wanted to play with a non-standard object and would have been prevented from doing so if Jacaranda had not advocated for his freedom to choose his own preferred play. This suggests that, even if the results of this study are relatively limited in terms of generalisation, at the very least some children are Scotland are not experiencing the inclusive education they are entitled to, therefore Scottish education is currently failing in its pledge to Get it Right for *Every* Child. The GIRFEC model claims to be enhancing inclusivity for autistic children through the guidance provided by the Scottish Government, but without appropriate actions and understanding, support can be significantly detrimental to these pupils, according to McKinley et al. (2022). Current 'inclusive education' policies and 'knowledge' of autism, with the ableist attitudes and practices that accompany them, are so deep-rooted and pervasive that true inclusion will continue to be hindered unless teachers begin to embrace authentic ways of being (Manalili, 2021).

Although research on the natural ways that autistic children play is relatively limited (Holmes & Willoughby, 2005), it can be tentatively substantiated that the Embracing Authentic Autistic Play professional learning programme accomplishes the aim of using the evidence base that is currently available to facilitate critical reflection, informed praxis and working towards creating better outcomes for autistic pupils. Professionals who are reflective, supportive, and responsive in their practice are vital for the successful inclusion of autistic pupils, and a lack of knowledge and understanding is a significant barrier to this, particularly if the teacher and wider school culture subscribes to ableist viewpoints (Lebenhagen, 2022). Each interview participant in their own way

commended the professional learning programme for achieving the desired effect for them, and indicated that the benefits of the app and its contents could be extensive if shared on a larger scale across local authorities in Scotland and expanded beyond the app itself. Having ongoing access to an ever-increasing repertoire of neuroaffirmative literature on authentic autistic play, such as my own work and that of other autistic researchers, can continue to feed into the alternative discourses that have been proposed in this research and welcomed by the participants interviewed, creating a renewed culture of acceptance for authentic autistic play. The survey data on teachers' perspectives on what kinds of play are welcomed in Scottish classrooms provides valuable insights into attitudes and potential barriers to authentic autistic play, which have been highlighted in the literature previously.

Button (2014) stressed that attitudes are among the main barriers in play for children with ASN and disabilities in Scotland, but noted too that staff often lack the necessary skills and understanding to make play inclusive for them. The idea of teacher mindset was raised several times throughout the interviews, including confusion around what and how much play should be 'allowed', and the survey data further implicated attitudes of teachers as potentially rejecting or disagreeing with certain types of play. The literature has highlighted that many schools in Scotland claim to be or believe that they are inclusive but they are likely inadvertently perpetuating a culture of false inclusion (Paechter, 2019). Culture and mindset having such a notable presence in the interview discussions could indicate that this is a construct that has often been discerned by participants, potentially corroborating the false inclusion contention. The intra-active cogitation of the various sources of this construct in the data and literature

provides us with a sense of ratification in accepting this as a key idea that holds water for making recommendations in the context of autistic play and inclusion moving forward.

Davis (2017) makes the implication that the adults' own professional or personal practices and beliefs can end up creating a barrier through rigid approaches, insensitivity to diversity in the classroom, or preference for fad educational interventions. School staff may stubbornly persist with their own chosen activities and goals despite a lack of progress towards their desired outcomes, instead of recognising the need to adapt their practice for pupils, then put the failure down to the autistic child and develop negative ideas of their personality, intent, and reasoning based on flawed perceptions (Wood, 2021). Few professionals are willing to acknowledge that their knowledge and practice is inadequate, although Paechter (2019) did have one example of a headteacher having an awareness that their ineffective responses to an autistic child's distress were a direct result of their own weaknesses. Often, mainstream strategies that are applied to autistic children negatively impact their chances of successful inclusion because they do not support that child's specific needs and create more disadvantage in the long run (McKinlay et al., 2022). Each interview participant acknowledged that every autistic pupil has their own individual challenges and preferences, therefore what works for one child may not work for another, and Cherry in particular noted that support has to be 'tailored' to the child. The literature indicated that teachers must have a thorough understanding of autistic children to begin with in order to tailor their classroom practice appropriately (Russell et al., 2022), though the literature and the data has suggested that this is not currently the case in Scotland.

According to Lowri (2021), when school staff have a better understanding of autism there is a better chance of school experiences being less negative and inclusion being more successful. One reason for this is that inadequate preparation through lack of autism-specific professional learning is a likely cause of poor attitudes towards effective inclusion for autistic pupils (Russell et al., 2022), and over half of primary schools were noted to have negative attitudes towards including autistic pupils in mainstream classes with even generic ASN and inclusion training failing to have a positive effect on autism-related inclusion (Leonard & Smyth. 2022). Whilst generic inclusion training is relatively common, autism-specific training is far less so, with only a quarter of teachers being reported to have accessed professional learning in this area (Ring et al., 2019). Furthermore, the most frequent type of training implemented in schools for preparing to work with autistic pupils tends to be one-off half- or full-day courses (Hersh & Elley, 2019). Often, training on this type of preparation relies on an intervention approach, including problematic concepts and language such as 'symptoms' 'treatment' and 'disorder' and fail to recognise neurodiversity. In the context of play, this could involve pre-conceived ideas of 'appropriate' play behaviours from a deficits point of view and assume that autistic children are atypically developing on a normative scale of development (as per Rust & Thanasiu, 2019). This relates to the discussion about 'not play' and only by rejecting the idea of 'appropriate' play behaviours can teachers begin to understand and accept the true nature of autistic play, and ending the culture of scrutinising autistic play and attempting to change it in any way is the only way forward for embracing authentic autistic play (Eisele & Howard, 2012). Peach in her interview and considered that perhaps if teachers understood autistic pupils' challenges better, they would be more able to adapt their practice.

Similarly, Willow believed that this needed to be addressed throughout educational culture. According to Willow, changing the mindset of the whole staff team can help bring them on board with a neuroaffirmitive culture change, and teachers can begin to change the culture by having the confidence to let pupils take control of their own experiences in a way that's relevant to them, including allowing opportunities for authentic play. Because the current culture has to change, according to Peach, how teachers go about inclusion should be evolving instead of doing things the way it has always been done by way of 'passed down' information, which she feels has been having negative consequences on neurodiverse experiences in the classroom. Professional learning where teachers are passively receiving information from another professional is unlikely to result in lasting impact, but where knowledge is gained and its impact scrutinised through critical reflection ongoing success is more likely (Porrit et al., 2017). Willow noted that this is often how training initiatives for teachers result in 'diluted' information being passed down from professional to professional and is often filtered through pre-conceived perceptions and interpretations of the original content. Leaving this open to potential distortion through ableist viewpoints could lead to the continuation of the norms and values held in a non-neuroaffirmitive culture. This can range from subtle insensitive language that perpetuates the marginalisation of autistic people to the full-on denial of their right to be themselves, and choosing language carefully with a commitment to opting for more neuroaffirmitive learning opportunities is the first step towards true inclusion (Bottema-Beutel et al., 2021). Jacaranda and I discussed us both having an interest in sharing neuroaffirmative terminology with others, and the importance of anti-ableist and non-discriminatory language. Following the professional learning programme she felt better equipped to explain her play

provision thanks to the programme giving her the language to do so. Willow also indicated that the professional learning programme had provided her with new, more specific language to help her justify her motives to other people, as she felt that there is a need to have the vocabulary be clear and consistent and this had given her the confidence to become more vocal in her explanations. Cherry felt the app armed her with the language to label the play she was observing as part of her own reflections, recognising what these terms were describing made her more certain of her own inclusive practice. Good professional learning enables teachers to have critical conversations about teaching and learning and helps them articulate ideas around values and beliefs in education (King, 2019).

Professional learning can be reimagined to enable teachers and other educators to adapt to the continuous changes in options and expectations, in opposition to rigid one-size-fits-all models of continued development for professionals, and like in this context technology can complement the rhizomatic becoming of staff in schools and beyond (Martin & Strom, 2017). Professional learning past ITE and early years courses can allow the adult to analyse their own contexts, consider children's preferences, and critically reflect the extent to which their own practice enables or disables the children in satisfying their own dispositions rather than the aspirations of the adults (Davis, 2017). Professional learning in general, however, is more likely to be effective when teachers are able to question existing practices and connect new and existing knowledge with their own practice (Makopoulou et al., 2021).

Peach mentioned that in the past she had received negative reactions to her questioning and pushing boundaries, and this needed to change through professional learning. Peach imagined that the app could provide this by informing and raising awareness about what autistic play might look like and how neurodivergent pupils could present in class, in order to better support them in spite of the dominant discourses. Jacaranda had noted that this was something that she benefited from by attending the professional learning programme over a year prior, but she had additional time since then to reflect further and put this into regular practice before being interviewed and her enhanced confidence and certainty around this was clear in her dialogue with me. This gap between participating in the professional learning and reflecting fully on its impact for Jacaranda can be compared to Willow mentioning a need to see how this looked in practice for her new class, giving her time to cogitate on the app's impact before fully reflecting on her practice moving forward, seems relevant here. Believing that extended time following an educational input allows for critical reflection on practices and deepens learning, the autism-specific professional learning programme studied by Ring et al. (2019) included a two-month gap after training followed by a period of supported critical reflection which included collegiate discussions, further reading and research, and networking with peers to open a dialogue about how the learning was being applied in practice. The ideas proposed by Willow for expanding the authentic autistic play programme further in a similar fashion would be an interesting assessment of whether this gap of time following professional learning is an important part of maximising its impact. Either way, providing an appropriate programme of learning, especially if it is innovative, critically reflective and based on practice, can provide teachers who do not feel knowledgeable or confident enough to make a change without it, can transform the

lives of autistic children (Ring et al., 2019). As far as moving forward with professional learning in this context is concerned, rejecting the traditional models of training which often fail to bridge theory with practice (Adams & Mann, 2021) and can lack innovative strategies for applying and adapting new knowledge to their specific circumstances (de Paor & Murphy, 2018), is more likely to lead to meaningful change.

In terms of innovation, the idea of thinking outside the box was raised in the interviews, where Jacaranda and I discussed having the confidence to make adaptations to the curriculum, the environment and our attitudes towards authentic autistic play. Peach similarly proposed that innovative practice might come more readily when better armed with information about meeting autistic learners' needs. McLaren (2013) suggests that successful inclusion of autistic pupils depends primarily on the comfort levels of the child before they can learn, and in order to do that norms and expectations need to be turned on their heads. Späth and Jongsma (2020) advocate for each autistic child to be autonomous masters of their own activities, avoiding the negative consequences of being restricted by neurotypical assumptions. This invites professionals working with autistic children to think outside the box by adapting interventions and shifting expectations to reframe what 'ought' to be done. In order for them to be successful and accepted, adults should be passing the locus of control to children to maximise the potential of their self-generated and authentic play (Chen, Lin, Huang & Lee, 2019). This issue of 'control' was raised by the interview participants but also considered within the survey results. I questioned, through the survey data, if teachers are perhaps concerned about the lack of normalised expectations in certain play activities and find the idea of having rules dictating the play more welcome than types of play that lack adult control

through pre-determined boundaries. This applied to rough and tumble play as well as technology-based and unstructured tinkering-type activities within the survey results. This bears considering, especially as

> autistic children craving physical sensory [enjoy]… rocking, swinging, twirling, or running … pushing hard, playing rough… the difference often comes down to the pace, frequency or intensity of the activities which can make them stand out from the crowd.
>
> (Guthrie Stirling, 2025a, p. 130)

Autistic children often thrive on experiences, interactions and connections with nonhuman elements of life, including sensory stimuli and material objects that attract their playful focus (Wiame, 2016). This was Fernand Deligny's whole raison d'être, in a way. There would be no need to place purpose on these activities or judge them in any way through this approach, and Deligny simply embraced the 'just-thisness' of autistic children's lives (Brightenti, 2018). This requires an element of letting go for teachers, allowing the children to just be. In her interview, Willow drew attention to a hesitation that teachers can have in relinquishing control during play, and Jacaranda attributed her increased ability to give pupils more space for autonomy and relinquishing control over play opportunities in lessons.to participating in the programme. Cherry determined that, even though scrutiny from above might lead to less freedom in play, teachers do often embrace shifting the locus of control to the children. Contradictorily, however, she confirmed that rough and tumble was never allowed in class in her experience, suggesting that the adults in that setting did have limitations to how much control they were willing to surrender. It could be surmised perhaps that whether teachers are hesitant to let go of the reins or happy to turn 'ought' on its head, policy and discourse can have a negative impact on their perceptions of what play is or should be. This is

similar to the sentiments shared by the Care Inspectorate with regards to risky play, which acknowledges that a traditional deficit model with a risk-averse approach can restrict children's play experiences unnecessarily (online). Future outcomes can be impacted by how much or how little autistic individuals are able to master their own actions, and their authenticity can be denied or restricted by those who are sceptical of the possibilities that autonomy might offer them (Späth & Jongsma, 2020). Emphasis should be on creating conditions that facilitate authentic autistic play rather than restricting children's activities through neurotypical expectations and comparisons (Theodorou & Nind, 2010). This 'limited inventory' of play is the problem that needs addressing in Deligny's eyes (Briggs, 2019) and letting autistic children go about their activities in their own way is the philosophy that allowed freedom and autonomy for the children in Deligny's care (Brighenti, 2018).

xi. The just-thisness of autistic play

Four years ago, as a novice PhD Applied Autism Research student, my initial exploration of the literature around my subject area was full of uncertainty and my unsystematic approach was frustrating for my supervisors who felt the clarity was missing from my proposal. Initially, as a crossover between my previous research on autism in education and attachment in the early years (two of my master's degree topics), I proposed a study on autistic play and attachment relationships within schools. It was a novel proposal, but lacked a certain spark for both myself and my supervisors, and I fumbled through the first few months of my doctorate. When through sheer happenstance I came across an article on the 'reinvention' of play for autistic children by Jonathyne Briggs (2019), it immediately initiated that missing spark and ironically 'reinvented' the entire proposal I

then sent to my supervisors. At the time of reading Briggs' article, I had little awareness of posthuman philosophy (that discovery came the following year, in fact) and had never heard of the primary subject of his article – Fernand Deligny. Without knowing the true impact that this pioneering individual would have on not only my literature review but my entire world view, I began to dig deeper, and the reinvention of my doctoral research began. My PhD study looks not only at inclusion and the importance of radically embracing the authentic autistic play of children in our schools, but it explores the dominant discourse around autistic play and seeks to challenge the status quo of neuronormative expectations of play through a posthuman lens (though this detail was unbeknownst to me at the time). With a dual interest in both autistic children's ways of being and cartography, Deligny's efforts to de-institutionalise the care of children and young people in the Cèvennes prioritised alleviating them of the expectations to conform to norms placed upon them, and eradicate any desire to 'compensate' for the perceived deficiencies of autism (Krtolica & Sibertin-Blanc, 2009). There was no course, pedagogy, or programme to follow in the Cèvennes, Brighenti (2018) notes instead that Deligny's only action came latterly in his tracing of the children's wander lines – their seemingly random movements around the compound where they wandered freely. This began to 'manifest itself' topographically, with Deligny and his colleagues making maps of the wander lines (Gunn, 2021), and through this cartographic discovery he theorised that autistic children may thrive far more than others on experiences, interactions, and connections with nonhuman elements of life: that which makes life more 'vivid' to them; the sensory inputs and material items; the natural and non-natural substances that attract their attention and fascination (Wiame, 2016). His work influenced key theories, and yet goes unrecognised by those who could benefit from it most. Many educated

teachers and researchers may be familiar with the concept of ecosystems around the child: the micro-; macro-; exo-; meso-; and chrono- systems each having an impact on how a child develops and grows (Bronfenbrenner, 1979). But fewer may be familiar with Deleuze and Guattari's milieu (surroundings) of assemblages and the rhythm between the milieu that becomes the ritornello (a recurring refrain, in musical terms), and should, when thinking about socially just pedagogies,

> consider the gestures – even the slightest gesture, as Deligny would have it – within a milieu and as a ritornello to rethink and reimagine the ethical, ontological and epistemological assumptions of subjectivity.
>
> (Gray van Heerden, 2017, p. 15)

Prior to my 'discovery' of posthumanism, I had already unwittingly begun a deep dive into posthumanist philosophy when I took immediate inspiration from reading about the under-recognised and under-rated (in my humble opinion) Deligny, and had begun shaping my 'radical' portrayal of authentic autistic play around many of his ideas. Relatively unheard of in applied autism research,

> the work of the French outsider thinker, Fernand Deligny (1913-1996) has yet to be truly explored in its full richness, peculiarity, and resistant novelty.
>
> (Burk, 2016, online)

Deligny, well known and well regarded by French educators and 'alternative' psychologists, has all but gone unnoticed for decades in the English-speaking world – most likely due to the fact that his works went untranslated until around a decade ago, though the possibility that his work is perceived as a bit 'out there' and too free-flow, much like his drawn cartographies of wandering children, may too be a reason for the lack of attention received for his (otherwise quite seminal) subject matter (Gray van

Heerden, 2017). Disregarding typical scientific modes of inquiry, he made no attempt to separate affect, theory and praxis, instead "writing as he thinks, with his whole experience… Deligny respects the randomness of thought" (Sauvagnargues, Verderber & Holland, 2016, p. 177). Deligny, who in many ways inspired Deleuze and Guattari's work, criticised the humans-that-we-are as being the product of long-standing tradition and subjugation (Psarologaki, 2023; Gray van Heerden, 2017). Society, at present, does not permit difference and restricts change. Aiming for transformative change, through Deligny's ideas posthumanism as an ontology can offer a better future, a different society, "characterised by both collective and individual will, desire and agency" (Psaralogaki, 2023, p. 37). In contemplating whether Deligny has ever been established as posthumanist, I recognise that these alternative approaches make a kind of sense where Deligny's ideas fall neatly into established posthuman notions of assemblages, such as milieu and the ritornello, according to Gray van Heerden (2017). For Deligny, the networks that he observed were not structures, but modes of being – demonstrated by his published nod to the Arachnean, the mythic spider weaving her web for no reason or meaning other than a way to simply exist and persist in her state of being – and the 'outsiders' that he encountered, existed within an 'exo-sphere', a marginalised territory within which he was able to position himself and co-exist with their 'errant' ways (Burk, 2016). The network is not purposeful, intentional, or contrived in any meaningful way, and

> we cannot interpret a spider's web as a conscious project, any more than the invention of fire or of writing may be considered the result of an individual project or will.
>
> (Sauvagnargues et al., 2016, p. 175)

Brighenti (2018) articulated the idea that Deligny embraced the "just-thisness of autistic children's lives" (p. 46) – an aptly-put (and, in my case, a much-repeated) description of how he and his colleagues observed the children at play. There was no interference or direction, with the adults becoming flexible in their own actions, to allow novel and individualised social expression – they gave these children back their humanity (Briggs, 2019). Deligny's mapping of the children's activities demonstrated that, despite being written off by society as disordered, the children did indeed play. They were intentional and joyful in their actions, but to the casual observer it just simply did not look like what had come to be known as 'normal' play. He felt that it was the "limited inventory of play, which focuses on the social needs of society" that was the problem, not the actual play itself (Briggs, 2019, p. 59). Deligny accepted their play, allowing them to go about their business, comfortable and satisfied in their own actions (Brighenti, 2018). His mapping of the children's wander lines never intended to translate any significance of their actions and movements, instead set out to "modify the gaze upon autistic children, but also on the milieu and on the customary, ornamented ways of being" (Sauvagnargues et al., 2016, p. 180). Deligny sought inquiry around relational networks as a way to undo the pedagogical impediments found in traditional models of education predicated on hierarchical concepts with no acknowledgement of the chaos of the world around the child. Chaos, in this sense, being the emergent assemblages and networks that emerge and oscillate without temperance, with the ever-present threat that they may (and at some point inevitably will) cease or collapse if they do not continue to respond organically to their surroundings. Deligny's approaches to inquiry, according to Gray van Heerden (2017), "disrupt normative power relations… and, accordingly allow for the creation – or emergence – of the genuinely new" (p. 19). In a somewhat unexpected turn

for the time, Deligny's philosophy was never about (re-) educating the autistic children or rehabilitating them to return to society, but more about establishing a re-educated ecosystem for them, through their families and other human milieu in their surroundings (Miguel, 2023). Deligny predicted a future of a movement towards the 'inclusion' of autistic youth in education and society – one that was in direct opposition to the total exclusion of such individuals in institutions – would end up becoming exclusion in a different way through their reinsertion. He sensed this would just be the recycling of old practices under new models, "in the postwar context of human capitalism" to make these children "efficient and useful…readapted for and for the sake of reintegration" (Miguel, 2023, p. 2). He instead wanted to explore the 'positivity' of autistic ways, through the repositioning of how others viewed the children, rather than expecting them to be held to the 'iconic image' of being 'well adjusted', and attempted to find new tools, new ways of researching and new ways to expose these 'modes d'être' (ways of being) (Miguel, 2023). Briggs (2019) identified this as a reinvention of autistic children's play, but I see it more as reinventing the attitudes towards autistic play, that society has come to accept as the norm. Autistic play has no need to be 'reinvented', it always has and always will be an authentic way to live for all autistic individuals, and it is their right to do so.

Deligny has, in many ways, been intra-actively present in the interviews themselves as well as the data that resulted from them, from the children accompanying their parents to the interview and being enabled to play freely and uninterrupted in and around the conversation and even becoming entangled with the conversation when something they said or did sparked a new train of thought for the participant as the discussion went on,

to the ideas that emerged about relinquishing control over children's play and allowing the 'just-thisness' of autistic play in practice. Although none of the participants in particular mentioned Deligny as a key influence in developing the language and justification, the ethos of Deligny's approach appeared to shine through in the dialogue and I am of the opinion that sharing this historical insight into the evidence that Deligny's attempt at the Cèvennes has offered us had a significant impact on participant's shifted mindsets moving forward. Deligny sets a real-life example of how to reject any ideas of 'normal' in practice by turning away from dominant discourses, even exist beyond them, and to stop assuming that autistic preferences need demystifying and reorientated in any way (Milton, 2016). Using Deligny's philosophy to guide theory and practice moving forward through professional learning can help manage realistic expectations for teachers and accept the 'just-thisness' of autistic play.

xii. Discussing the research and its assemblage

Narratives that perpetuate the status quo and determine the dominant discourse, preventing critical thinking and crushing the truths of lived experience, are rejected here for the telling instead of *stories*. Stories give voice to those who are often left in the sidelines, sharing their valid, valuable and validating lives and experiences and contributing to new knowledge that would otherwise go unheard underneath the noisy relentlessness of common narratives in society. So perhaps we are missing something here… where are the voices of the autistic children about whom we speak so much of in this research? Sadly, due to circumstances out of my control their voices are currently unheard within this study. This is not a choice that I came to willingly, and in fact is a glaring let down for me in terms of my moral integrity as well as my researcher integrity.

From the beginning of my research, I strongly professed the importance of listening to the lived experiences and unheard voices of the autistic community. It is a matter close to my heart and something I hold in high regard both personally and professionally. In designing the mobile research app, I did indeed create a version of the in-app video survey for autistic children to respond to and share their play preferences in a bespoke autism-friendly app format that included visual supports for communication and straightforward 'thumb up' 'thumb down' and 'thumb-in-the-middle' on-screen touch responses as an adapted version of the same video survey for teachers, with all the same video clips as the adult version. I included autistic children and their families in the design of the app (consulting on social media about whether smiley faces or thumbs were more accessible) and updated stakeholders on the progress of what had affectionately become known as 'the kids' app' as it was developed. It was finished at the same time as the teachers' version, and went through all the same rigorous testing and review as the other app. Unfortunately, due to the similarities of the apps (without any further opportunities for explaining the differences) the app was rejected on Google Play and would be unavailable for distribution on both platforms. After numerous appeals with no success, I accepted defeat and announced that, at this time, the kids' app would not be a part of this research. It was my intention to have the results available to consider autistic children's play preferences alongside the teachers' results. The coding was matched for statistical comparison of the two, and the cloud technology would have enabled the same opportunities to analyse the data diffractively with the interviews. However, it is accepted here that the research is not over, the assemblage is not complete, and the show must go one. The research will continue to become, and the foundations have been laid for the opportunity to investigate autistic

children's play preferences through the in-app video survey. Just not right now, and I have accepted that this is not a limitation of the study but an opportunity to move forward with the research in another way at a later time. The research has still achieved what it set out to achieve – creating an opportunity to challenge the dominant discourse and disrupt the status quo, by writing "different stories from the ones we've been hearing all our lives" (Brabazon, 2023, ch. 7).

The objectives of this research have been to find out:

1. To what extent can a novel mobile app successfully integrate a survey with video-based-provocations, a professional learning programme, and a platform for critical reflection of teachers' practice as a tool for applied autism research in education?
2. In what ways might a professional learning programme about authentic autistic play in Scottish schools support teachers to reflect and engage critically in self-evaluation (as per the GTCS standards for registration)?
3. Are there ways in which this programme might have an impact on the successful inclusion of autistic pupils through play, by disrupting the dominant discourse on autistic play and challenging the status quo in Scottish schools?

I would consider the integration of the survey, professional learning programme and critical reflection platform a success in the sense that it was logistically accomplished to be distributed as a tool for applied autism research in education. The development, scrutiny, and review process that the app underwent ensured that this was successful, and there were no technical bugs or logistical issues in the end for this version of the Play Research App. Whether the app was a success in terms of the original intention to engage around two hundred survey respondents and thirty-two professional learning participants (as estimated in my ethics application), depends on one's interpretation of 'success'. This was, I thought at the time, a conservative estimate but I was hoping that having a larger sample would have provided a potent set of data that would give more

trustworthiness and credibility to my results. There were sixty-five survey respondents and four interview participants in the end, with no one involved in the professional learning programme providing any in-depth feedback to consider qualitative data from the app itself. However, when I started out I was very much at the beginning of my journey as a becoming researcher and I now consider the diffractive knowledge gleaned from the survey and interview data to absolutely be credible and trustworthy in terms of postqualitative research. One of the purposes of this, as explained in the third chapter, is to avoid doing the same types of research over and over and expecting different results. This research is academically replicable, if experienced in the same parameters of app development and so on, but in postqualitative research the outcomes are unlikely to be the same given the intra-active nature of *this* research assemblage producing *these* results. Critical posthumanism lends itself well to this notion, and the idea of being a nomadic researcher, in the sense of being free from constraining tempos and unshakable discourses in academia, moving in rhythm of the research rather than established academic frameworks (Sidebottom, 2019). I have done so throughout the doctoral journey, bending and weaving with the development of the app (which took longer than expected) and the responses of the participants (which resulted in less engagement than first anticipated), adapting creatively and maintaining my responsibility and response-ability to ethico-onto-epistemological considerations in the process. In this sense I consider the first objective of the research to be achieved, the novel research app has successfully integrated all aspects of the research that it had set out to do.

The ways in which the professional learning programme could support teachers to reflect and engage critically in self-evaluation became quite apparent through the interview discussions, and all four participants agreed that this was a key feature of the professional learning programme. However, this was not actualised in the manner I first expected. The ongoing and repeated '5 critical questions' within the professional learning programme itself were successful in achieving a supported opportunity to reflect and engage critically in self-evaluation, this was apparent from the interview discussions. However, the built-in app function for uploading weekly diary-based critical reflections was almost entirely unused. A number of participants had reached out by email or social media to 'explain' that they had struggled to move on to this section of the app following the professional learning programme, and I quickly realised that limiting interview participants to those who had completed this part of the research would result in having no interviews. It was decided to open the interviews up to participants who had completed the professional learning but not necessarily the diary section of the app. The most common explanation for this was time constraints, and I felt this was understandable given the tight turnaround of the study after so many delays during the app development process. During the interviews it was suggested more than once that using the first two sections of the app (the video clips and the professional learning modules) as a 'jumping off point' for further learning, and it was surmised that a gap of time following this would suit the purposes of effective critical reflection. It would be a recommendation moving forward, therefore, that the diary uploads would be encouraged after a longer period of reflection and (as suggested by Willow) an opportunity to discuss with colleagues who have also participated in the professional learning programme. Jacaranda had achieved a heightened confidence

and capability in reflecting on her practice as time went on, with her having had over a year to cogitate on the professional learning programme. Her video log with the '5 Critical Questions' compared to her interview response with the same questions demonstrated a deeper and more detailed reflection albeit unchanged in the overall message from her feedback. Furthermore it was raised in Cherry's interview that, unbeknownst to me when I designed the app, the survey with video-based-provocations became the first step in self-reflection by way of allowing teachers to think deeply about their preconceived notions of play. With this in mind, despite the critical-reflection-specific function on the app being underused in this research, I would consider the professional learning programme's capacity in supporting teachers to reflect and engage critically in self-evaluation to be multiplicitous, and I would credit the app with a greater ability to engage teachers in self-reflection than first anticipated. The prospect of implementing the final section of the app still exists moving forward, potentially with the added elements of time and collegiate discussion to consider in order to maximise the opportunities of this function.

The final objective of the study was to consider the ways in which the professional learning programme might have an impact on the successful inclusion of autistic pupils through play. The ways in which this unfolded within the research were often unanticipated, but as a nomadic researcher I was prepared to expect the unexpected. I had intended, of course, to include the play preferences of autistic children through the results of the kids' app' survey which would potentially have created a very specific discussion about teachers' attitudes towards play in comparison to that of their autistic pupils. In the absence of the children's results, however, I had to fight a considerable

amount of deflation surrounding the prospects of maximising the results of the teachers' survey. That is, until I approached the data through the visual representation that allowed me to 'read, write and think through' the results diffractively in a similar way to and concomitantly with the interview data. Based on the literature and common discourses of play, I expected to find that teachers would perhaps have viewed solitary and parallel play as less welcome than group play, based on Parten's original findings presuming that these are less appropriate beyond the toddler and preschool stages, and therefore I would have expected to see stronger agreement with the group play videos. This was not the case, however, and the patterns that emerged from the survey data seemingly suggested instead that (rather than the social categories of play) the types of play that were less favourable were the types of play that lacked substantial boundaries and adult control through perceived rules and expectations. The comment from the participant who stated that they failed to see how many of the activities were to be considered play corroborated the concept of 'not play' being a factor in teachers' views on play in the classroom. Adults often reject an activity in which they cannot direct it towards their own ideas for the activities' optimal outcome as play, according to Howard and McInnes' (2012) study, even though this could result in children being more easily distracted, uttering more negative vocalisations and limiting their physical engagement with activities, for example. In this regard, it is the video survey that has been more impactful than expected in relation to its potential to affect the successful inclusion of autistic pupils – despite an in-depth appraisal of the surrounding literature this was not anticipated to be the direction taken with teachers' views on welcoming different types of play in the classroom. This concept of autistic play preferences being constrained by perceived rules and boundaries, as opposed to or in addition to the

notion of 'age appropriate' or 'developmentally appropriate' play, is an interesting concept to consider moving forward (particularly if the opportunity arises to survey autistic children's play preferences) but it does not impact the efficacy of the professional learning programme in any way. This is apparent through the interview participants' feedback that the professional learning programme was most effective in addressing issues such as mindset, culture, language and justification, among others. Providing a framework for adapting practice through innovation, thinking outside the box, and rejecting dominant discourses and challenging the status quo have been key ideas that were raised in the interviews and that remains the case even in spite of the surprising survey results. This objective, too, has been achieved successfully through the research, although the limitations for the results remain in terms of sample size which could be addressed through follow-up research in line with the suggestion that the professional learning programme is shared more widely across Scotland with increased buy-in.

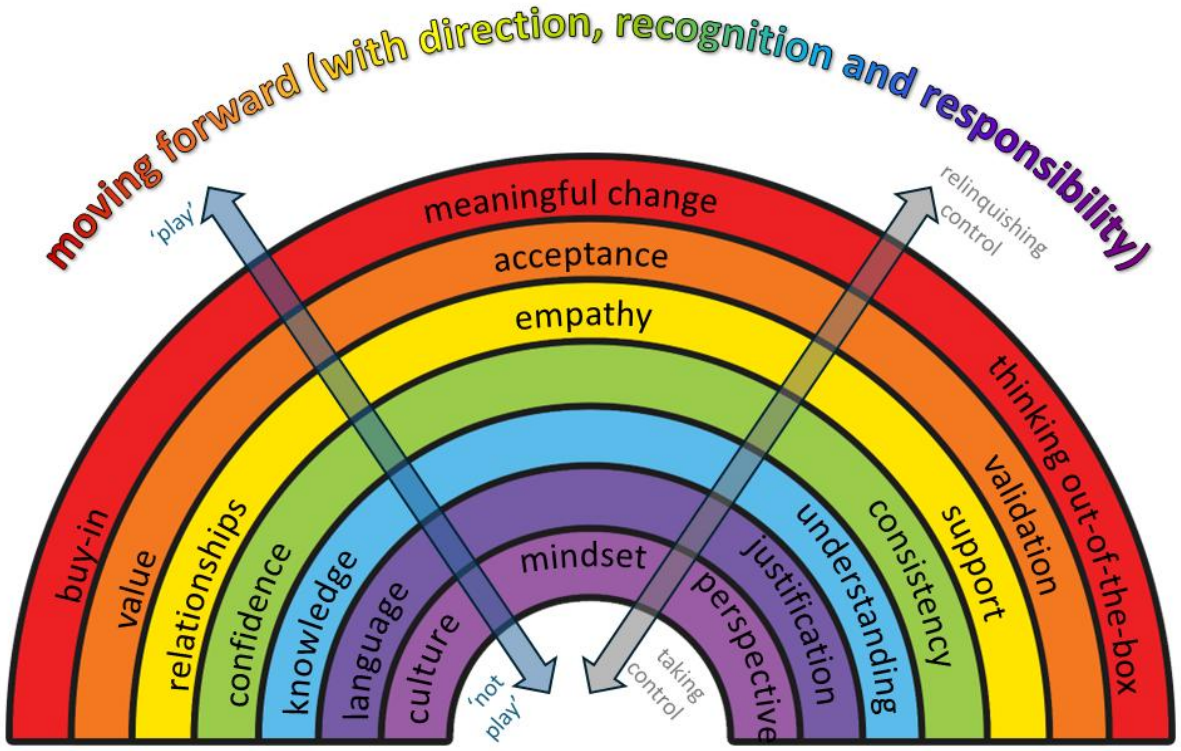
xiii. Visualising the research entanglements and diffractive data

As noted previously, the data in this study is comprised of both qualitative and quantitative 'methods', but not in the traditional 'mixed methods' sense, so the data is not 'analysed' in the traditional sense but instead diffracted as entanglements in the research assemblage. Thus, the quantitative and qualitative data, through a postqualitative and critical posthuman lens, go through a process of diffraction, reflection, and critical dialogue in a 'softer' version of postqualitative research which 'troubles' methods rather than outright rejecting them. Reflecting and diffracting, though both established in this research as important practices for both the researcher

and the participants, are both concepts that are rooted in physics as well as for the purposes of the research. In the literal sense, reflection is the passive mirroring of an object as it exists, a wave gets sent back from an object in the same form. Diffraction on the other hand passes through an object and it interferes with the wave, changing it and entangling the wave and the object intra-actively. Reflection as the physical phenomenon of mirroring has long been applied as a metaphorical description of the internal thought process in which someone takes a 'step back' and looks interoceptively at their life or situation, potentially to consider changing it (Bozalek, 2021). The physical phenomenon of diffraction refers to 'wave behaviour' of light, water or sound waves where they appear to bend and spread when they 'encounter an obstruction' (Bozalek, 2021, p. 5) According to Bozalek (2021), Barad proposes using diffraction as a methodology to engage with difference instead of similarity in an affirmative way. Young, Crinall and Malone (2022) suggest that diffraction in this sense is about finding difference in the encounters of actors in the assemblage, rather than a familiar practice of reflecting at a distance.

Finding patterns of difference instead of sameness is the fifth principal of Blom et al.'s (2025) diffractive data entanglements framework, and this can be used to visualise the research as discussed in this chapter. In the search for difference this research found that the results of both the survey and the interviews, as well as the surrounding data of spacetime and the wider assemblage, led to ideas and concepts that were not the expected outcomes based on the landscape of the literature (which was reviewed early on in the doctoral journey). It was presumed, although not necessarily hypothesised, that teachers would welcome the types of play that Parten and Smilansky 'approved' of

for 'age appropriate' behaviours (and reject the play that was not welcome for the ages-and-stages of primary and secondary education). However, what came about diffractively were the concepts of 'taking control' / 'relinquishing control', and 'not play' / 'play', creating difference in the expected outcomes of the research. Through discussions with interview participants this was raised as a type of continuum, such as 'how far along their journey' individual teachers might be and how much potential shifts in mindset had affected school and local authority cultures. This continuum can be demonstrated as spanning the key ideas developed diffractively, with the following visualisation to support the dissemination of the outcomes of this research:



[IMAGE 15: DIFFRACTIVE DATA ENTANGLEMENTS AS A RAINBOW VISUAL]

As an example of diffraction as a physical process is the way that light is diffracted through rain, creating a rainbow. The above original infographic has been generated in the image of a rainbow to highlight the metaphorical process of diffraction in research

through a known physical process of diffraction. Just as the light waves passing through the rain and moisture droplets create a spectrum of colour, the diffractive data entanglements have resulted in key ideas within the assemblage of this research. Each cohort of key ideas as discussed in this chapter are visualised here as parts of the light spectrum that is a rainbow and, although it appears to be linear in fashion, much like a real rainbow the colours are not separate lines or hierarchical structures but different presentations of the same source. In the literal sense, the colours of the rainbow are not separate entities but different presentations of the same light source. In the metaphorical sense within the research, the colours of the rainbow are different presentations of the same entangled data. Within the visual, the multidirectional arrows represent the ideas of 'play' / 'not play' and 'taking control' / 'relinquishing control' not as dualisms of either / or, but as intra-active concepts which were raised in the diffractive survey data entanglements as well as scattered across the interview discussions. There is no progressive step-by-step way to get from one end of the arrows to the other, they intra-act with the key ideas of the research. The overarching concept of the visual is about the becoming of the research, how it extends beyond this thesis, moving forward with direction, recognition and responsibility (as previously discussed), and so thinking about this is how this discussion chapter will culminate before moving onto the closing thoughts.

Moving forward, it was raised in the interviews that establishing more widespread use of the app, potentially with 'official' endorsement from local authority and Scottish Government backing, the professional learning programme stands to have a considerable impact on the successful inclusion of autistic pupils in Scotland's schools

through play. Furthermore, the survey and diary sections of the app, when used intra-actively in line with the recommendations made by interview participants (such as extra time to reflect and engage in dialogue and use the videos as a first step in self-reflection) evidently have the potential to enhance this impact further. Taking a leaf out of Deligny's book, teachers can start by accepting the mindset that autistic children often thrive on experiences, interactions and connections with nonhuman elements of life, including sensory stimuli and material objects, taking an approach that does not judge these activities or apply biased intentions to their purpose. This does require an element of letting go for teachers, allowing the children to just be, which has been demonstrated here to be challenging for some professionals. Deligny simply embraced the 'just-thisness' of autistic children's lives. Through the app and in particular the professional learning programme, it is apparent that this mindset can be embraced on an individual basis by participants through increased knowledge and understanding and learning relevant language for its justification, but also potentially on a wider cultural basis across Scotland if there is enough buy-in and out-of-the-box thinking to create meaningful change. This change, through embracing Deligny's ideas as well as those of other key theorists such as Braidotti, Barad, Deleuze and Guattari, posthumanism as a guiding ontology can offer better futures, alternative cultures, with collective and individual freedom, desire and agency for autistic pupils in Scotland. Using the revised diffractive data entanglements framework as well as the rainbow metaphor for the research entanglements would be my recommendation for future research and practice that encompasses these ideas for embracing authentic autistic play in Scottish schools.

7. Closing Thoughts

Closure is seen as one of the 'ultimate goals' of a doctoral thesis and can be likened to a blood clot, according to Ingram (2021), stopping the flow of blood, a sense of completion, coagulation to bring an end to the surging stream. But Ingram also, somewhat morbidly, points out that this coagulation might also be the result of death. The thesis conclusion is often assumed to be the end of the journey, the ultimate destination, the final curtain call. Scholarly death might be a risk if the researcher brings premature closure to the research's flow of becoming. Posthumanism and postqualitative research offers an alternative to scholarly death for doctoral students, where there are expectations placed on conclusions to cohere the research around dichotomous ideas such as question/answer, knowing/not-knowing, and failure/success (Ingram, 2021). Where a conventional PhD thesis calls for "a tidy package neatly bound by an inviting introduction and a comfortable conclusion" we have to ask "what happens when a theoretical framework provides, or rather demands, an ending that is not so neatly packaged?" (Ingram, 2021, p. 253). Academic activism can drive forward change, embrace social justice, and transform lives, with Louise Lambert noting that

> historically our [higher] education systems... have been based on particular ways of knowing and experiencing the world that is rooted in colonial and patriarchal practices, and this can lead to a narrowing of perspectives.
>
> (Cui, online)

Doctoral writing can be seen as both a textual body of work and a process of researcher identity development, formed concurrently and usually sedimented within what is seen as accepted academic canon, according to Ingram (2021). For some doctoral

researchers, however, this is an uneasy concept and they seek alternatives to the disciplinary standards they feel might stifle or constrain their research and approaches inside

> a rigid model that follows a prescribed format and style; as a result, academic writing is treated as… a generic and straightforward skill that can be learned.
>
> (Ingram, 2021, p. 256)

The game of doctoral thesis writing is finite and pre-determined, the thesis being the prize that can be won by following the rules and meeting approval based on set criteria and structured progressions along the linear path to successful outcomes (Ingram, 2021). I think I have clearly established throughout this thesis that this is simply not how I process the world, and thus my PhD simply could not and would not emerge in this way. Instead of changing or breaking the rules or writing being a violation, acknowledging academic activism as a credible and desirable way to be, according to Ingram (2021). Being creative, open, diverse and free, researchers can generate legitimate postqualitative bodies of work and still be recognised as successful academics. Doctoral knowledge is expected to be written (and concluded) in ways that are accepted and expected, but this assumption can be unsettled. In keeping with ethico-onto-epistemological foundations, but with a nod to standardised closure, I offer my closing thoughts.

Doctoral success is often thought of in terms of impact. However, impact is often thought of as progressive, linear, or cumulative, on a scale of less important to more important. In opposition of that,

> I want to discuss how a different approach, which challenges linearality and temporality and gives value to the small and

> disregarded, enables us to think differently about what is important.
> Ripples in the pond replace the ledgers of accumulation.
>
> (Taylor et al., 2021, p. 183)

Together Taylor, Quinn and Franklin Phipps describe their work as being-acting-thinking-doing-playing-knowing-with, 'withness' having a key role to play in relationality and intra-action, but this looks different for each researcher within that and opens up new possibilities for "more nuanced and response-able… opportunities for change" (Taylor et al., 2021, p. 188). Even if these opportunities present themselves by sheer happenstance through 'aha' moments, the emerging 'new' from this can address injustice and inequality through an ethico-onto-epistemology, and in this kind of research, impact is an "emergent event in the making" (p. 188). In the context of this research, there were so many 'aha' moments and learning events that developed through sheer happenstance that I lost count. In predicting the impact of my research as most academics are expected to share early on in proposals and summaries as they make their way through the doctoral journey, I had an idea of what I hoped would be the impact. Originally when proposing this research under a pragmatic research paradigm, I wrote that pragmatism often acknowledges language, culture, subjective thoughts and the physical world as multiplicitous entities affecting research through praxis, focusing on the desired ends of the research, which in this case was more successful inclusion of autistic pupils in Scottish schools. However, posthumanism allows, and even encourages, the reconceptualisation of our place in the world and of our research methodology as well as providing an opportunity to "ask different questions, feel different things, and think different thoughts" (Ulmer, 2017, p. 16). Throughout this research, there have been opportunities to explore the non-autistic or 'neurotypical' discourses as well as the experiences of the autistic community and serves a purpose

in laying the groundwork for troubling the neurotypical perceptions of the autistic experience.

Doctoral failure, on the other hand, is often conceptualised as being the result of not meeting the established expectations of the research, and not living up to these standards can result in feelings of guilt, shame, fear and anxiety among PhD students (Ingram, 2021). By refuting this conception, we can re-evaluate what we consider to be productive and valued in research by embracing the possibility of so-called failure to conform in order to create unexpected successes. In this vein, researchers can also 'fail' to provide an ending, conclusion or closure to the readers because

> Failure, in this sense, is seen as productive and generative… indicates that more has to and can be done… understood as a *way of knowing*, and is constitutive of knowledge in its own right.
>
> (Ingram, 2021, p. 262)

Murray (2019) contends that 'liminars' exist beyond the norms of social and political expectations such as those within academic research. In this research, there have been elements that have not been controlled or controllable, predicted or predictable, and the "structural, relational and political upheavals" have breached boundaries and created "dynamic shifts in the liminal space" of the research (Murray, 2019, p. 186). Whilst I am a person who thrives on predictability and routine, I rejected this in order to embark on the "meaning making expedition I was on" and through this process I "created my own journey of becoming" as a researcher (Calderwood, 2025, p. 267). I never set out to embrace liminality in any way, I started out thinking that I had a clear picture of what my research would look like and what it would entail, but by allowing elements of discomfort and uncertainty my research has created 'transformations' and

'shifts in being' through liminality (French et al., 2023). By embracing French, Griffin and Lambert's (2023) emphasis on "the material, the technological, socio-historical, the spatial, and the temporal" of Barad's ideas and Braidotti's nomadic posthuman subjects existing in assemblages compounded by complexities, uncertainties and instabilities, we take our research beyond any Deleuze-Guattarian rhizomatic underpinnings. Taking on these views within the development of an in-app professional learning facility for teachers, I have created the conditions for entangling the learner with the learning and the digital environment in which the programme is delivered (Calderwood, 2025). French, Griffin and Lambert (2023) suggest these conditions can be assemblages in and of themselves and components intersect and interrelate with the resultant learning and will strengthen outcomes. Teachers bring with them their own backgrounds, experiences, prejudices and social structures that intra-act with the app's assemblage and creates deeper learning not just for the individual teacher but potentially on a more rhizomatic scale. This became evident through the interview data, the app feedback, and the survey data which illustrated the variety of views that emerged. The context of the professional learning programme was designed to trouble established perspectives through considering current policy and practice, because finding any sort of dissonance between what has previously been 'known' and what is newly understood can lead to lasting and meaningful change (Cole et al., 2022), which ended up being a key idea from the data.

Re-imagining of professional learning and teacher development can allow flexibility to step away from previous models that appeared too linear, fixed, one-size-fits-all in nature (Martin & Strom, 2017). Mobile professional learning for teachers is an ill- and /or

under-researched area of education research, according to Burns (2015). New tools and technologies for rhizomatic learning are growing but the connected and relational environments through which they are being designed and developed are currently poorly researched (Emke & Kukulska-Hulme, 2023). When innovation occurs outside of the expected range of resources available, it can "reveal the limitations of the current paradigm" which then "requires a fundamental restructuring of dominant practices and concepts" (dos Santos Foguel & Lopez, 2024, p. 115). These could be effectively explored through 'new' paradigms and methodologies. Intricate problems can be challenged by applying multiple combinations of IoT and cutting-edge technologies with numerous possible pathways for researchers to approach this through innovation, digitisation, information handling and cloud computing, among other options (Doley et al., 2024). Technology can facilitate the disruption of the status quo and hierarchical roles in education, such as teacher, learner, researcher, student, and so on – rewriting the paths of becoming for teachers engaging in professional learning in new ways (Martin & Strom, 2017). What the technology does and how it is done is more important than what the technology itself is,

> because teacher development is a non-linear process, a rhizomatic approach complemented by technological tools allows teachers and teacher educators to conceptualise their development as recursive and perpetually becoming.
>
> (Martin & Strom, 2017, p. 162)

Although familiarity with Deleuze and Guattari's theories have been an important part of my becoming as a researcher, Emke and Kukulska-Hulme (2023) are doubtful that intimate knowledge of this is even necessary to grasp the surrounding concepts. The professional learning programme does not address these foundational philosophies

and focuses on the approaches that emerged through the development of these theories such Deligny's philosophies, more specific in nature for considering autistic play. Having never previously heard of Fernand Deligny, and very little awareness of posthumanism, I could never have predicted the impact that these influences would have on my research when I embarked on my doctoral journey three years ago. My journey of becoming as a researcher took a complete detour when I discovered the (in my opinion) under-recognised and under-rated work of Deligny and the slow realisation that his alternative approaches fall neatly into established posthuman notions around assemblages, milieu and the ritornello. It reinvented not only the research I have engaged in but my entire world view and holds the potential to provide a solid foundation for more increasingly recognised theories around authentic autistic play. Milton (2016) corroborates that Deligny's ideas can, even years later, develop into a sound foundation for developing theories around autistic activity and points out the possibility of a like-mindedness between Deligny and many contemporary autistic authors with potential similarities between his writing and theirs. Deligny saw this and embodied it in his life's work. As an autistic researcher myself, Deligny's ideas make sense to me more than any other historic accounts of autism and play that I have ever encountered and will continue to prevail as a leading influence in my personal and professional world view. My admiration of Deligny's celebration of the just-thisness of autistic play has forever shaped my ideas around the radical acceptance of autistic ways of being and has led me to, questioning the dominant discourse, challenging the status quo, and defecting from social expectations – with posthumanism as the critical lens through which I will continue to frame my thinking. My closing thoughts hope to express this future potential through offering the opportunity to journey with me through

my own research and becoming, or perhaps taking an interest in the work of fellow academics taking inspiration from his celebration of the just-thisness of autistic children's play, or potentially just planting a seed of thought in others who have yet to consider questioning the dominant discourse or challenging the status quo, as a springboard for future critical reflection on embracing authentic autistic play.

In learning to consider assemblage thinking and becoming as a nomadic enquirer, I had to become comfortable with the idea that the 'ends' of the research did not exist, and the research impact was likely to be quite 'loose' in its expectations. Much like postqualitative education researcher Louise Lambert, I felt a loose goal was still helpful in guiding my research:

> The overall goal of my work is to think about and practice broader and more inclusive pedagogical practices in our institutions, to diversify pedagogical practices, and to consider the possibilities such diversification might afford for the ways in which we do teaching and learning and the spaces we do them in. If we re-think some of the ways of doing education that we take for granted and invite more people into the conversation about what the effects of these practices are on different groups of people, then we are in a better position to be able to reimagine education's impacts and outcomes in practical ways.
>
> (Cui, online)

This was able to be tightened up in a sense as my own becoming-researcher began to develop and the literature, dialogue and ethic-onto-epistemology surrounding my research topic informed the goals I had for the study. They also had to be pivoted, adapted and in certain cases (such as the kids' app) sidelined altogether, but none of this was intimidating or unsettling to me anymore as I had become comfortable in embracing the response-ability required for postqualitative research that enabled me to roll with the punches as they say. In terms of the loose 'big picture' of this research, I

intended to look into whether a teacher professional learning programme about play and autism could have an impact on autistic pupils' experiences of school, and result in a more successful inclusive education in Scotland. The impact of the research had the potential to be even more far-reaching than this from the beginning, with the possibility of laying the groundwork for further multidisciplinary research into effective play-based supports for autistic children in Scottish schools as well as influencing the practice and ongoing professional learning of teachers in Scotland. This was indicated in my original proposal where I indicated that it was the intention that positive outcomes (the more successful inclusion of autistic pupils) would result in a wider rollout of the programme, and this was my justification for having both qualitative and quantitative data to crystalise the results which would go a long way in giving confidence to its users. I think even then I recognised that officially-endorsed 'buy-in' would be an essential part of this wider rollout, but it was the discussions with interview participants that made this concept more concrete. What was unclear to me at the time was how much the wider dialogue and awareness-raising of my research would impact future outcomes, and as Louise Lambert acknowledges, impact is "a slow, ongoing, and iterative process that involves lots of people" and we cannot underestimate the power of "being able to contribute to debates on the development of thinking " through emergent dialogues and the publication of papers and reports (Cui, online). Throughout my doctoral journey I was engaging in online and in-person networking and dialogue, participating in local, national and international conferences, engaging with individuals and organisations involved in both autism/ASN and play practice, as well as becoming a published author of three book chapters on authentic autistic play alongside established authors, researchers and practitioners. This practice, according to Lambert, is "more emergent

but is often the foundation for change… you do get a lot of feedback over time and from a lot of people about how things are working/ not working!" (Cui, online).

My first chapter publication, in the book "Born to Play" by Tam Baillie and John McKendrick (Eds), came with its own challenges. Having written academically for a several years, I found it incredibly difficult to match energy with the editors' wish for authors to "attune themselves to a wider audience" and to be "informative and authoritative, backed by research evidence" in order to reach an audience of readers who "have an interest in finding out more about play and provide them with a better understanding" through far more accessible and easy-to-process language than I was used to producing. Both editors will agree, I am sure, that my stubbornness and determination to do things my way has caused a certain level of tension and perhaps uncertainty on their part but we came together and chatted it out and the result in the end was a well-received chapter, described by Jacinda on social media as:

> a super interesting read, and has encouraged me to challenge my own misconceptions about authentic Autistic play. A great read, no notes!!

She credited me with "an excellent way of sharing information" but of course I share that credit with the dedicated editors who nudged me into begrudging growth as an author and helped me shift the tone of my writing towards a wider audience for greater impact. In closing the chapter "Portraits of Autistic Play" I shared my goals for what this impact might be, beseeching readers to

> use this chapter to help you think of every playing child's context: their world; their experiences; their strengths; their challenges; their people and their environments, throughout all of time and beyond. Embrace all of the things that make them, them, and will continue to

> make them, them. Acknowledge that play can just be play, no matter who is doing the playing, because all play is okay.
>
> (Guthrie Stirling, 2025a, p. 137)

The influence that my own research and reading has had on my world view is evident throughout my ancillary writing and dissemination, starting with my tentative toe-dipping conference presentation "The Hidden Gems of Autistic Play" at the PARC conference in November 2022 and becoming progressively more self-assured and well-informed throughout the subsequent years of my doctoral journey.

The more academic text "The Double Empathy Reader" by Damian Milton (Ed), described as exploring theory, neurodivergent lived experience and implications for practice, contained the exploratory chapter "Authentic Autistic Play: A Double Empathy Problem?" (Guthrie Stirling, 2025b). Expanding on my previous work, I infused my theory and practice within authentic autistic play with the 'Double Empathy Problem' which "give[s] voice to the social disjuncture and difficulties experienced by autistic people regarding mutual reciprocity with others" (Milton, 2025, p. 3). Through this chapter I delved into the idea that the misunderstandings in autistic play extend beyond adult-child exchanges to the child's peers, and a certain type of 'social synchronisation' may be required for autistic children to have acceptance and inclusion within their play experiences. This took the idea of normative play expectations beyond pedagogy and into the social realm for autistic children and argued that there is "a potential mismatch in the very foundations of why autistic and non-autistic children play" (Guthrie Stirling, 2025b, p. 318). An interpretive dissonance within play can create tensions between autistic children and their non-autistic peers, and not between two or more autistic peers, but the double empathy element of autism theory explains this through autistic

people having a greater affinity for and understanding of other autistic people. Adults and children can learn and adapt their ability to synchronise with autistic children through embracing authentic autistic play and further challenge the dominant discourses around the topic. This chapter also gave me the opportunity to write about my own lived experience of autistic play, and that of my daughters. Although something of a segue from my PhD research, Milton (2025) noted that I do indeed reflect upon my doctoral research in the chapter to expand on some of the potential misunderstandings in autistic play. When I initially contacted Damian about joining the cohort of leading researchers, theorists and practitioners coming together to create the reader, I had not fully developed the idea I had brewing for authentic autistic play in the context of double empathy, but the growing body of research and open dialogue around autistic play I uncovered during my doctoral journey had me thinking about my children's experiences of play as well as my own growing up. Channelling this thinking into an academic-but-accessible body of work gave me an outlet for exploring lived experience alongside my academic endeavours in a relational and connected way, and I thank Damian for giving me the opportunity to do so given my novice status as a researcher.

My third chapter of the year "Authentic Autistic Play is a Human Right" in McKendrick (Ed), in press at the time of submission, was actually the first of the chapters to be written even though it is the last to be published. An extension to the conference presentation of the same name, this chapter expanded on an argument I made within an academic poster created for my concurrent masters-level studies in Supporting Teacher Learning at the university. Critiquing the language used in UNCRC Article 31 regarding play rights, the combined conference paper, academic poster, turned book

chapter explores perceived 'appropriateness' of play through a policy perspective in contrast to the lived experience of autistic children. Leaning on much of the same evidence base from the literature in my thesis, angling for the 'radical acceptance' of autistic play, this chapter promotes a rights-based, non-discriminatory, and anti-ableist approach to play in Scotland in a far more specific policy-to-practice context. I shared my personal and professional experience leading up to this, and its impact:

> Through this deeper understanding, I was able to look at Article 31 in such great depth that it became the centre of my presentation for the IPA Triennial World Conference when I spoke about it in June 2023. I was able to share this with others, to quite considerable and completely unanticipated interest, and now I know that there are practitioners and researchers taking this deeper understanding of Article 31 back to their own contexts and looking at it in a whole new light. In sharing this chapter with an even wider audience, I do hope that it is equally well received and valued by readers, and the message about authentic autistic play as a human right can continue to spread.
>
> (Guthrie Stirling, in press)

The considerable unanticipated interest that followed my conference presentation was a significant factor in the evolution of my positionality as a researcher and the strength of conviction I developed in the arguments I was making to others throughout and in addition to my PhD research. I was blown away by the response, including comment on social media such as:

> Thank you, thank you for your voice! This session… probably my most important learning of the conference. I have a long way to go but grateful for having my eyes… opened a bit more. You ma'am are a blessing!
>
> Conference attendee, Instagram

After becoming a Trustee of the Scottish branch of the International Play Association, I was honoured to discover through my fellow board members that the following testimony was written in Play Wales' magazine in the weeks following the conference:

> As an autistic playworker, I valued the opportunity to meet and share ideas with other like-minded playworkers from across the globe… both informing my practice and helping me to recognise my own abilities and insight. I was particularly affected by a presentation made by an autistic lady from Scotland, who inspired me with the story of her own family, experiences, and research. Her work has challenged and enriched my understanding of children's right to play and increased my own resolve to champion authentic, autistic children's play back home in Wales. I felt truly inspired upon leaving Scotland, and ready to be the best playworker I can be.
>
> Conference attendee, Play for Wales

My various outputs and the feedback from within the wider movement of authentic autistic play all shaped my expectations and the overall becoming of the research. It did not necessarily change the presumed impact of the research, but it certainly altered the perceptions that I had of how this might come about. The final shaping of the research impact came as I was reading, writing and thinking through the entangled data diffractively. This meant that until that point, how the various aspects of the research would be analysed, what the expected outcomes were, and how this would be 'written up' in the end were all open concepts up in the air right up until the last weeks of my doctoral journey. This is clearly an unsettling concept for seasoned researchers, and I wholeheartedly thank my supervisory team for having the faith and trust in me to pull it all together in the end, but for me as a PhD student I had never written a doctoral thesis before and therefore had no temptation to fall back on established norms and expectations of the social sciences. As a neurodivergent researcher, living with not only autism as a factor but also ADHD and dyslexia, finding a way to write up the research in a way that maximised my thought processes and approaches to writing was a challenging barrier for me to overcome but the concepts of researcher- and research-becoming tied in to that very well through the postqualitative lens. Coming to terms with

the idea that impact coming in the form of shifting mindsets and changing culture "is a slow process and doesn't 'deliver' in short and easily measurable timeframes or solutions-focused approaches" (Cui, online) was also incredibly difficult for me as a person who thrives on certainty, predictability and clear-cut results.

In no uncertain terms, there is a movement underway towards the radical acceptance of authentic autistic play. This PhD research is but one part of that, but for me has been the catalyst to the community, network, reciprocation, advocacy and activism that has accompanied my journey over the last four years. It is becoming. This chapter is "by no means an ending in a finite sense – it [is] both a conclusion and an opening to new possibilities and new questions" (Ingram, 2021, p. 263). As I offer my closing thoughts on this research, I feel comfortable and content with the becoming of this research and a wider movement towards the inclusion of autistic pupils in a more authentic and neuroaffirmitive way, across Scotland and further afield, thanks to the conversations, connections, collaborations and confirmations from professionals, practitioners, parents and persons with lived experience that I have had relational encounters with throughout the doctoral journey. It may be a slow process, but it has been happening and will continue to happen and I can acknowledge the place that my research and influence has had in projecting that goal forward. In setting the scene at the beginning of the thesis, I said that we can trouble the knowledge that precedes our own research and take the data through a journey of meaning making and (re)construction, in order to contribute new knowledge from an alternative position of the less privileged, more diverse identities, genders, communities, cultures and (dis)abilities. I feel confident that this has been achieved (as part of a greater becoming) through this research and the

diffractive data entanglement that emerged. The journey of meaning making may have involved a few diversions and wrong turns, but as Ingram (2021) emphasises, this can often lead to unexpected successes. Psarologaki (2023), in response to societal inequalities and humanist ideals, suggested we can "either passively reproduce or faintly coup against the problem" (p. 14). I would be tempted to suggest that this research has done more than 'faintly coup' and perhaps be bold enough to posit that the research itself, as well as the wider movement that the becoming of this research is a part of, well and truly rocks the boat in this context. The development of the data 'rainbow' visualisation (Image 15) is a valuable provocation for the widespread acceptance of authentic autistic play in Scottish schools, with the potential impact of a more successful inclusion for autistic pupils. This visual provocation came about diffractively from the concepts of 'taking control' / 'relinquishing control', and 'not play' / 'play', as a type of continuum spanning the key ideas developed diffractively. It can be used alongside the 'jumping off point' of the Play Research App and requisitioned as part of the Embracing Authentic Autistic Play Series for professional learning. Furthermore, the revised diffractive data entanglements visualisation (Image 13) provides a different kind of provocation, for researchers and practitioners to enquire postqualitatively in a 'loose but tight' approach in an ethico-onto-epistemology that allows them to remain authentic (particularly appealing to autistic researchers, perhaps) whilst respecting the ethical, institutional and academic boundaries that apply to them as an academic. As prefaced at the beginning of this thesis, as long as we are "being honest about which values we are embedding in our work and forgoing hiding behind a guise of objectivity" and aim to have "ethical, robust, and thorough research design which addresses research questions in a transparent and repeatable way"

(Botha, 2020, p. 7) we will have academic rigour without sacrificing our authenticity as researchers.

Deleuze and Guattari suggest that subtle challenges to the status quo through minor gestures in research are more effective than attempting major shifts in understanding (Sidebottom & Bancroft, in press). This research is contextually focused on supporting the successful inclusion of autistic pupils in Scottish schools through play, thus the odds of any substantial or large-scale societal change are slim. With four interview participants and sixty-five survey participants, the study is small. But it is mighty. The participants have shown us just how mighty it can be, and provided provocations far beyond what was expected at the start of this journey. There is a motivation and willingness within the teaching community of Scotland to use the key ideas from this research to make the Embracing Authentic Autistic Play professional learning programme grow arms and legs, and really take off for maximum impact, if the buy-in and endorsement can be found for it. Within the confines of this research the small contextual social shift that it offers in the understanding of education and social justice can lead our thinking down different, less anticipated avenues, according to Sidebottom and Bancroft (in press), and constitutes emergent knowledge that innovatively affords us the data that may otherwise have been overlooked.

If, however, the future vision described by interview participants to take the professional learning programme Scotland-wide, using the app as a 'jumping off point' for widespread acceptance of authentic autistic play in schools, with potential endorsement through official channels, the possibilities for sharing the impact of this

research are limitless both within and (somewhere down the line perhaps) beyond Scotland.

Part four: References and Appendices

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Part four: References and Appendices

9. Appendices

Appendix A: Play Research App Design Brief

Original 24th July 2022:

- Randomly generated username for anonymity
- Sign up with email/phone number for alerts (but no way for researcher to have these details)
- User consent/information form to be completed upon download, applicable to all phases of research
- Video-as-questions survey with 80 video clips on autoplay and Likert scale (buttons or slider) 1-5 (Strongly Agree to Strongly Disagree)
- Static statement/question displayed "I would welcome this type of play from the pupils in my class…" with all video clips
- Prompt to respond following submission of video responses with next-phase recruitment queries – do you currently work within a play-based curriculum? do you have one or more autistic pupils in your class? would you like to participate in professional learning about autistic play?
- Automatic exclusion from next phase if answer is no to any of the above, send to thank you page and lock out of app
- Automatic inclusion for next phase if answer is yes to all, and invite to participate in professional learning event
- Professional learning webinar to take place outside of app (Zoom)
- Usernames to be used in Zoom, instruction page on app how to do this prior to event
- Webinar course materials will be uploaded to app for easy access
- Diary study should allow in-app uploads of video, audio and word document files
- Frequent notifications from app as reminders to update diary, whole group questions and prompts to upload diary regularly, and chat/messaging function will be needed
- Interviews will also take place outside of app, again on Zoom using usernames
- Web link for incentive to be sent out via the app, with no way of researcher knowing participants' personal information (eg using a reward code for online incentive with external provider)

Appendix B: Embracing Authentic Autistic Play Series (text versions)

Module one (Part one):
Ages and Stages of
Play Written and
presented by Elise
Guthrie Stirling
Embracing Authentic Autistic Play Series

Before we start:
All of the spoken information you are about to hear will be on screen within the text, for accessibility.
Please do not feel you have to write everything down, but do feel free to jot notes when you find something particularly meaningful or relevant.
There is no formal assessment for this course but you are expected to critically reflect on the module content and record this in the next section of the app, and continue critical reflection in practice.
You will be asked a brief question - this is for your benefit to help
you self-assess your understanding.
If you have any accessibility issues, or require this information in a different format, please email elise.stirling@strath.ac.uk
Lastly, I just want to say thank you for joining
me! Module one (Part one): Ages and Stages of
Play Learning Outcomes
During part one we are learning to:
Take a critical look at play ages and stages.
Consider how neurotypical expectations may be harmful.
Think about alternative ways to use play
classifications. At the end of part one you should be
able to:
Reflect on the usefulness of ages and stages of play.
Identify some ways in which hierarchical classifications of play are often incompatible with autistic play.
Consider the use of play classifications in observations that are non-hierarchical for illustrative and/or descriptive instead of linear progressions.
Embracing Authentic Autistic Play Series

Childhood, and play by default, has been characterised throughout the twentieth century as sequential, with abstract concepts of maturity and rigid stages of development.
‘Ages and stages’ of normative development and developmentally- appropriate behaviour became the ultimate definition of childhood.
Ages and Stages of Play
Whiteman, De Gioia and Mevawalla, 2012
Start thinking…
Has this been your
experience? If not, why?
If so, in
what
way
?

There was an expectation that each child would be endowed with pre-determined means of progressing towards adulthood along a developmental pathway.
Any child who deviated from this was purposefully 'normalised', often through behaviourist approaches which reinforced universal 'truths' about play.

These notions of ages-and-stages- appropriate activities and normative development have been so ingrained in education and childcare that any ideas outside of this paradigm might seem alien to some (Whiteman, De Gioia and Mevawalla, 2012) Autistic play preferences, for example, may not match teachers' expected preferences (Verschuur et al, 2011)
Autistic pupils may have far more positive outcomes if play preferences are identified accurately where authentic autistic play preferences are allowed (Doody and Mertz, 2013)
Whilst autistic children's play preferences can be superficially altered through behavioural approaches (Leaf et al, 2012), the negative implications of this are far-reaching.
So
what is
the
literature
saying about
it?
By not being able to live their life authentically, an autistic individual's wellbeing may be harmed (Spath and Jongsma, 2019) and this includes being restricted based on neurotypical (non- autistic, non-divergent) assumptions.
Poor wellbeing (including low self-esteem and depression) can be the result of submitting to the needs and wants of others - such as conforming to neurotypical
expectations - so this should be shifted to reframe what autistic children 'ought' to do (Bottema- Beutel, Park and Kim, 2017).
Here, whilst the normative expectations of play are explored for the purposes of description and classification of play, they do not require to be used as stages of maturation or as a linear pathway of development.

The classic study by Mildred Parten in 1932 determined some now- common categories of young children's participation in social activities and play, and noted that social participation was likely to increase with age…
Preferences for play in Parten's study were indicated as being:
from 2 to 2 ½ years was solitary play, from 2 ½ to 3 ½ years was parallel play, and from 3 ½ to 4 ½ was associative play.

So
what are
these
stages of
play then?
Ages and Stages of
Play Start
thinking…
do you apply these norms to your
class? Rubin, Maioni and Hornung,
1976: 414

Unoccupied – watching anything of passing interest; walking around room; playing with body.
Solitary – playing alone with materials different from children within speaking distance; no conversation.
Onlooker – watching others; perhaps talking, but no entry into play situation.
Parten's Stages of Play
Despite this well-established measure of early social play preferences, some researchers have sought to extend and update the reliability and replicability of the study, and its results, due to Parten's limited sample and the differences in data found since.
For example, the greater numbers of 3 and 4 year olds observed engaging in solitary play and showing less participation in cooperative play (the next 'stage' after associative play) than Parten originally thought (Rubin, Maioni and Hornung, 1976).

So
let
's
see this
hierarchy
!
Rubin, Watson and Jambor suggested that the unoccupied and onlooker categories failed to describe play, but instead described types of behaviour, and therefore were removed from the hierarchy of social play.
Furthermore, they found qualitative difficulties in separating associative and cooperative play, and joined them together in a new 'group play' category.
Parten's original stages of social play consisted of six categories, summarised by Rubin, Watson and Jambor (1978):
Parallel – playing independently with toys similar to others nearby; no attempt to play with others.
Associative – playing with other children; no role assignment or organisation of activity.
Cooperative – playing in an organised group.
Cooperative
Associati
ve
Parallel
Onlooker
Solitary
Unoccupid

There are other classifications of play - often used concurrently with Parten's stages of play, Sara Smilansky's play classification has been used for decades in a similarly hierarchical fashion, often creating a 'nested hierarchy' of play stages. Based originally on Jean Piaget's three main types of play, which were functional/practice play, symbolic/fantasy play, and games with rules, Smilansky's stages had similarly cognitive focus, as opposed to Parten's social ideas.
Takhvar and Smith,
1990 Gunal and
Tufan, 2019 So
what are

these
stages of
play then?
Ages and Stages of
Play Start
thinking…
were you aware of the different classifications?

Smilansky's Stages of Play
The four stages of play were described in great detail in Smilansky's original (1968) book, but Rubin, Maioni and Hornung (1976: 414) succinctly defined them as follows:
The constructive play stage was devised as an intermediary stage between functional and dramatic, and

So
let'
s
see
the
difference!
Functional play - simple, repetitive muscle movements with or without objects
Constructive play - manipulation of objects to construct or 'create' something
Dramatic play - the substitution of an imaginary situation to satisfy the child's personal wishes
Games with Rules - the acceptance of pre- arranged rules and the adjustment of these rules
by calling activities with a constrained end-point (as in drawing, modelling, jigsaws, etc) "constructive play", she departed from Piaget's analysis in that such activities were not seen as fully playful
Takhvar and Smith, 1990: 117

Due to its focus on primarily object-based play, Smilansky's classification ignores key types of play, such as rough and tumble - characteristic of play across childhood and beyond in many cultures - leading to this later being added as a further category.
A potential problem of classifications and descriptions of, for example, dramatic and constructive play, is that they speak to the child's own mind, and adults inferring intent on children's play could lead to incorrect classification -
How do we know if a child is trying to satisfy his or her own needs or wishes by substituting an imaginary solution, or is trying to 'create' something.
Takhvar and Smith, 1990:
115 So
what's
the
issue
with this then?
A child's intent may even start out as one category (eg constructive) and progress onto another (eg dramatic) within the same play session using the same play materials.
Bearing this in mind, and remembering that Parten's stages of play may too be

less reliable when viewed as hierarchical, the outcome may be to reject the use of these classifications as normative judgements of maturity of play.
Instead we can use them as purely descriptive tools, as well as supplement them with the additional descriptor of rough and tumble.
All of these categories are for illustrative, descriptive purposes, not as a judgement on intent, mind, or maturity in any way.

A B
Solitary
Functiona
l
Parallel
Construct
ive Group
Dramatic
*Unoccupied
Games with
Rules
*Onlooker
Rough and Tumble
The combined use of both Parten's and Smilansky's types of play will result in the categories as found in the table here →
The table can be used to help record observations when play is observed.
Play may be categorised as any combination of column A and column B, but not more than one from each column.
The behaviours marked with an asterisk may feature in play sessions with no further category from column B (as these are the types of play rejected by Rubin) but can be noted nonetheless during observations.
Much like in Rubin (1982), the play observed in children can be categorised using both the cognitive play classifications of Smilansky and the social play classifications of Parten, along with one further key word to record further detail

eg "Solitary Constructive Jigsaw"
Observing Children's Play

Module one (Part one): Ages and Stages of Play
Learning Outcomes
During part one we have been learning to:
Take a critical look at play ages and stages.
Consider how neurotypical expectations may be harmful.
Think about alternative ways to use play
classifications. At the end of part one you should now
be able to:
Reflect on the usefulness of ages and stages of play.
Identify some ways in which hierarchical classifications of play are often incompatible with autistic play.
Consider the use of play classifications in observations that are non-hierarchical for illustrative and/or descriptive instead of linear progreassions.
Embracing Authentic Autistic Play Series

Pause the screen and ask yourself:

What are you learning?
How are you doing?
How do you know?
How can you improve?
Where do you go for
help?

Use these 5 critical questions to shape your reflections.

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References

Module one (Part two):
Play Pedagogy in Scotland
Written and Presented by Elise Guthrie Stirling
Embracing Authentic Autistic Play Series

All of the spoken information you are about
to hear will be on screen within the text, for accessibility.
Please do not feel you have to write everything down, but do feel free to jot notes when you find something particularly meaningful or relevant.
There is no formal assessment for this course but you are expected to critically reflect on the module content and record this in the next section of the app, and continue critical reflection in practice.
You will be asked a brief question - this is for your benefit to help
you self-assess your understanding.
If you have any accessibility issues, or require this information in a different format, please email elise.stirling@strath.ac.uk
Lastly, I just want to say thank you for joining

me! Embracing Authentic Autistic Play Series
During part one we are learning to:
Put forward some different ways of implementing play in the classroom. Recognise some challenges of implementing a play pedagogy in Scotland. Consider how a play- based curriculum can be more inclusive.
At the end of part two you should be able to:
Recognise ways of approaching play that allow autistic authenticity.
Identify potential opportunities to make play more inclusive.
Critically reflect on your own practice within play-based learning Before we start:
Module one (Part two): Play Pedagogy in Scotland
Learning Outcomes

Play Pedagogy in Scotland
Start thinking…
Which would you say describes your school?
Is it 'ideal' or 'non-ideal' ? Why ?

An ideal primary school for children in Scotland, according to Fraser-Smith et al (2021), would have the option to play "whatever you want" (p65) and children would be able to play together or choose their own type of play activities.
A non-ideal school, for pupils in their study, is lacking in play and fun, with 'boring' schools being described as "no fun" and "not very playful" (p60).
Martlew, Stephen and Ellis (2011) found that, not only did children's views of ideal learning activities differ from teachers' views, but also that they valued autonomy and choice particularly highly.
Despite having one of the lowest school starting ages in Europe, Scotland has traditionally had a teacher- centered pedagogy in school, in direct contrast with early years establishments which are more child-centered.

Teachers in primary schools can use play to develop pedagogy based on: 'Curriculum-generated play' to teach specific skills; or 'Play-generated curriculum' which is responsive to the children's preferences.
However,
While play is considered to be an important element in an early years establishment, many primary teachers are unsure how to play for such a curriculum. Martlew et al, 2011: 73

How do I use a curriculum based on play in my class? Play Pedagogy In Scotland Is play a valued activity in your

school?
How?
Why?
Connecting play with learning and teaching requires understanding and awareness of different types of play, as well as the role of adults in various scenarios (Arnott et al, 2020).
Play needs scaffolding appropriate, but also opportunities for free, uninterrupted exploration.
Lack of confidence in this can lead to teachers feeling unsure about organising a curriculum based on play in the primary classroom, and potentially revert to adult-led practice.
Primary teachers in Scotland would benefit from "more opportunities to develop knowledge and confidence with play-based pedagogies, particularly in relation to supporting free play" (Arnot et al, 2020: 48).
McKendrick (2019) states that promoting an understanding of play among professionals is an important precursor for establishing a play pedagogy in Scottish Education.
Without a shared understanding, play as pedagogy inevitably will continue to be challenged in schools,
as often its value is decried by those who lack this.

It has been generally assumed in Scotland that when children start school, they should start focusing on 'the 3Rs' of read, write and reckon, from the start, much earlier than many other countries (Palmer, 2019).
Teachers in Scotland require no formal learning in play, and there are notable differences in those who do, and tend to be 'afforders' of play, to those who do not, and are more likely to be 'allowers' of play (Audain, 2016).
Whilst the theoretical base of a course in play pedagogy makes a helpful contribution, it is the practice of play pedagogy that matters most (McKendrick, 2019).
Deep thinking…
In what ways do you and other professionals you know make provision for play and playful approaches to learning and teaching in class?
Pedagogy of play… is defined
broadly as the ways in which
[we] make provision for play
and playful approaches to
learning and teaching, how
they design play/learning
environments, and all the
pedagogical decisions,
techniques and strategies
they use to support or
enhance learning and
teaching through play.
Wood, 2009: 27
Play Pedagogy in Scotland

In Scotland, play pedagogy is now becoming increasingly supported and is endorsed by local and national policy, as well as wider links to global priorities for children and their right to play and learn (Hamilton and Wood, 2020).
Whilst playful approaches are the norm in pre-school early years education and

care, it is becoming more prominent within early years primary stages - Primary 1 to Primary 3 (Palmer, 2019).
There continues to be evidence supporting a 'kindergarten stage' in Scotland, spanning from age 3 to age 8, to develop play pedagogy across the early years of childhood.
This early childhood stage of up to 8 years is a peak time of growth and brain development, qualitatively different to the rest of childhood, and it is most readily developed through play mediums (Palmer, 2019).
More specifically:
P1 to P3 spans a critical stage where through play, children can develop the ability to think, reflect and reason.
Hamilton and Wood, 2020: 6
Play in the middle and upper stages of primary school should not be forgotten, though, and Douglas, Frew and Blain (n.d.) found that older children also preferred a play-based approach, but there is little emphasis on play beyond the age of 8 in practice or in research.
Play Pedagogy in Scotland

In spite of the possibilities, there continues to be an expectation that the 3Rs, encompassed within literacy and numeracy priorities of Scotland's Curriculum for Excellence, will take precedence over play from P1 to P7, which often overrides the views of early childhood specialists who recognise its value (Palmer, 2019).
Many adults in society have long seen play as a trivial pursuit, but its importance is becoming increasingly more accepted in the last few years, and 'on paper' at least, play pedagogy as a whole is now in a better position to be rolled out across Scotland (Hunter Blair, 2021).
The Scottish Government released Realising the Ambition: Being Me in early 2020, which is "a splendid document… recommending play-based pedagogy across the early level (Palmer, 2021: 15).
It does, however, fail to address the full 0-8 range of early childhood, and there is still a considerable amount of work to be done to make sure that more children can access a play pedagogy, but "translating documentary rhetoric into real-life practice can be extremely challenging" (Hunter Blair, 2021: 41).
Coming to the understanding that play often takes forms that are different to what may be expected by teachers is key (Ryan dnd Northey-Berg, 2014).
Play Pedagogy in Scotland
Can you examine your own biases and rethink 'What is play?'
Think - Teachers can use this knowledge to allow autonomy over play choices, and any policies where only certain types of play are promoted and accepted, can be avoided.
A play pedagogy should by nature be inclusive of all, including children with additional support needs (ASN) and disabilities, and "no child should be excluded [from play] or feel that they do not belong just because they are different" (Henderson, 2021: 65).
Play Pedagogy in Scotland
Start thinking…
Have you ever had preconceptions based on outdated

ideas
such
as
this
?

For example, participation and engagement in play need to be measured by joining in with others, as some children just prefer solitary play (despite preconceptions that solitary play indicates a lack of involvement). Sometimes solitude may be perfectly appropriate for that individual to absorb their environment and learn from their play (Gibbs and Cooper, 2014).

Attitudes are among the main barriers to play for disabled children in Scotland, according to Button (2014).
Most professionals work in teams who come from different backgrounds, values, experiences and beliefs about play and inclusion.
Sometimes, falling back on 'common knowledge' such as policy and legislation might be the only way to navigate the tensions between the theory and practice of inclusive play pedagogies (Casey, 2010).
In his blog on play and inclusion, John Davis highlights that Scottish Government policy documents such as Building the Ambition seek to
When observing play provision, professionals may often note "there are children who flit around on the margins and are rarely engaged in play… with others" (Casey, 2010: 7) but there is no right or wrong when it comes to play.
Children with ASN can, through play, be themselves, create their own meaning-making and gain their own individual satisfaction from playing their way (Casey, 2010).
With a long history of children with ASN and disabilities such as autism having their play compared to their peers and subsequently intervened with, Nind, Flewitt and Theodorou (2014) propose that the time has come to reconsider how play is defined and constructed for each individual, and allow every child to have agency over their own play, no matter their perceived challenges.
The dominant discourse has been of "the disabled child as a non-playing object that requires professional therapeutic intervention" (Goodley and Runswick-Cole, in Nind, Flewitt and Theodorou, 2014: 344).
remove artificial age and stage boundaries and promote the notion that early learning and play pedagogy should attend to the issues of children's rights, equal opportunities, responsiveness (to children's perspectives) and relationship building.
Davis, 2017: online

Do you
see any
evidence
of this at
all? What?
Why?

Similarly, Gibbs and Cooper (2014) note that professionals should be able to acknowledge and embrace each child's own preferences at that particular stage in their own way, regardless of perceived development, in order to be inclusive. In doing so, they could effect change not only on an individual level for that child, but potentially at a wider institutional or systemic level through their

own reflective practice.
Continued professional learning can allow teachers to analyse their own contexts, question children's participation, and evaluate the extent that their own professional practice enables the children to achieve their own aspirations rather than those of the adults (Davis, 2017).
In that vein, "[teaching] qualifications should be seen to be not the end but the start of an individual's professional learning journey" (Audain, 2016: 22).

Play Pedagogy in Scotland
Deep thinking…
In what ways do you and other professionals you know critically reflect on own practice and preconceptions about play and inclusion?
Professionals engaging in play pedagogy in Scotland should reflect critically on their own preconceptions about play and inclusion, and push beyond rigid regimes and processes that may come from colleagues and managers, to understand where each child is in their play journey, and embrace play for play's sake in their own practice (Davis, 2017).

Embracing Authentic Autistic Play
Series During part one we have been learning to:
Put forward some different ways of implementing play in the classroom. Recognise some challenges of implementing a play pedagogy in Scotland. Consider how a play- based curriculum can be more inclusive.

At the end of part two you should now be able to:
Recognise ways of approaching play that allow autistic authenticity.
Identify potential opportunities to make play more inclusive.
Critically reflect on your own practice within play-based learning

Module one (Part two): Play Pedagogy in Scotland
Learning Outcomes

Pause the screen and ask yourself:
What are you learning?
How are you
doing? How do
you know?
How can you improve?
Where do you go for help?

Use these 5 critical questions to shape your reflections.

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Play Pedagogy in Scotland
Written and presented by Elise Guthrie Stirling
Module two (Part one):
Inclusion and Children's
Rights in Scotland
Embracing Authentic Autistic Play Series

All of the spoken information you are about to hear will be on screen within the text, for accessibility.
Please do not feel you have to write everything down, but do feel free to jot notes when you find something particularly meaningful or relevant.
There is no formal assessment for this course but you are expected to critically reflect on the module content and record this in the next section of the app, and continue critical reflection in practice.
You will be asked a brief question - this is for your benefit to help you self-assess your understanding.
If you have any accessibility issues, or require this information in a different format, please email elise.stirling@strath.ac.uk
Lastly, I just want to say thank you for joining me! Module two (Part one):
Inclusion and Children's Rights in Scotland
Learning Outcomes

During part one we are learning to:
Reflect on the meaning of inclusion, inclusive education, and inclusive play.
Consider what inclusive education is, or should be, in a Scottish context.
Make connections between international rights to inclusion and Scottish policy and legislation, and how these may interrelate.
At the end of part one you should be able to:
Critically evaluate your own understanding of inclusion within play and education, and apply this to your context.
Take an informed stance within your context regarding inclusion and how this looks, or ought to look, in Scotland.
Relate UN treaties to inclusion in Scottish policy and legislation.
Before we start:

What do you think of when you hear the word 'inclusion'?
Little is specifically defined in official Scottish literature (such as policies legislation, and initiatives) about the meaning of inclusion itself.
Inclusion in education, and inclusive education, are often alluded to or referred to in many (if not all) of the main documents in one form or another using various phrases and descriptions such as:
"provid[ing] education for the child in question in a school other than a special school"

"mainstreaming as a central pillar of our inclusive approach to education" Consider the following statement:
Inclusion can mean different things to different people in different settings and is perhaps in danger of becoming one of those words that come and go and lose any real meaning.
Casey, 2005,

in Button, 2014: 4
What is inclusion to you?
Scottish Government, 2019: 3
Scottish Parliament, 2000: Section
15 It is, however, rarely defined.
Initially, in the 1970s, there was considerable chatter in the UK about mainstreaming children educational support needs and disabilities culminating in the release of the 'hugely influential' Warnock Report (Murdoch et al, 2020) The Warnock Report in 1978 resulted in major changes to specialist provision for children, and introduced the term 'special educational needs' or SEN, which was
then used widely in both England and Scotland (Weedon and Lezcano-Barbero, 2021).

This was relatively closely followed, on a somewhat larger scale, by the 'milestone' Salamanca Statement (Barret et al, 2015), and the United Nations treaties that have been driving change internationally ever since (Couper-Kenney and Riddell, 2021).
The Salamanca Statement was the culmination of the 1994 World Conference on Special Needs Education in Salamanca, Spain, and it challenged governments the world over to reject attitudes that children with SEN and disabilities did not belong in generalised (mainstream) education (Florian, 2019).
It asked governments to "endorse and prioritise inclusive education policy and practice, and to work together to support and expand provision" (Florian, 2019: 691).
It opened up the notion of 'inclusive education' to a wider audience, highlighted disparities in education and exclusionary practices that exist within schools and systems, and importantly, it was rights-based and linked to widder United Nations goals for inclusion (Florian, 2019).
That every child has the right to be included in an appropriate and meaningful education has been entreated internationally for over three decades now, with the United Nations Convention on the Rights of the Child (UNCRC) being the first binding international tool for civil, political, economic and social rights of children having being produced in 1989 (Aldgate, 2013).
Furthermore, children with disabilities have additional rights protected within the United Nations Convention on the Rights of Persons with disabilities (UNCRPD).

The UNCRPD directly addresses the issue of inclusive education, building on previous directives from the UNCRC, the Salamanca Statement (and subsequent framework) and other international standards.
The UNCRPD is complementary to, and builds upon, the recommendations within the UNCRC and highlights that
The inclusion of children with disabilities is a matter of social justice and an essential investment of the future. It is not based on charity or goodwill, but is an integral element of the expression and realization of universal human rights.
UNICEF, 2007: v
It implores all countries to commit to inclusive education as a goal, consider modifications to their curriculum and pedagogy, and provide access to specific supports as required (UNICEF, 2007).
This reinforces the right for all children to be educated in an environment that is inclusive, on an equal basis with others, with full participation supported

through reasonable adjustments where needed (Couper-Kenney and Riddell, 2021).
no country has succeeded in constructing a school system that lives up to the ideals and intentions of equality.
Henry, 2017,
in Lebenhagen, 2022: 1

Following the Salamanca Statement, Scottish legislation was brought in line with its recommendations.
The Standards in Scotland's Schools Act 2000 legislated presumption of mainstream "whereby the default position for all children is to be educated in their local school" (Barrett et al, 2015: 180).
The principle still applies today, although thanks to the Education (Additional Support for Learning)(Scotland) Act 2004, the use of 'SEN' was replaced by 'ASN', additional support needs, and the ASL Act also broadened the categories of those needing support (Weedon and Lezcano-Barbero, 2021).
In Scotland, the government's attempts to address UNCRC directives are enshrined in Getting it Right for Every Child, or GIRFEC.
GIRFEC puts children at the centre of everyday practice and considers all factors that account for their wellbeing through eight 'wellbeing indicators' aligned with UNCRC articles (Aldgate, 2013).
It spans healthcare, social care and the third sector, as well as considering inclusive education, with the wellbeing indicators being:
Safe
Healthy
Achievin
g
Nurtured
Active
Respecte
d
Responsi
ble
Included
or, SHANARRI, as they are often referred to.

However,
The wellbeing outcomes shape the National Practice Model and other policies that aim to achieve the most favourable outcomes for all children in Scotland.
However, there are potentially concerns that "GIRFEC is not rights-based, but focuses on the assessment needs in relation to wellbeing indicators" (Riddell and Carmichael, 2019: 488).
Although wellbeing and rights are two different concepts, they may have become conflated within Scottish inclusive education guidance.
As a result, it may be questionable whether GIRFEC is actually a socially just realisation of universal human rights, and whether it is actually ensuring the inclusion of all in education.
We need, therefore, to consider ways in which inclusion in Scotland might be interpreted…

What do you think about the emphasis on GIRFEC in Scottish education and how it relates to inclusion?

Do you see a relationship with the UNCRC directives?

Perhaps pause and note down your thoughts on this.

To support teachers in becoming more inclusive, the Scottish Universities Inclusion Group (SUIG) in partnership with the Scottish Government and the General Teaching Council for Scotland (GTCS) created the National Framework for Inclusion (NFI).
It aims to highlight what is expected of student teachers, qualified teachers, and teacher educators, in terms of inclusive education in relation to GTCS standards, which mandate certain values, beliefs, knowledge, understanding, skills and abilities at every stage of their careers (SUIG, 2022).
The third edition of the framework was informed by legislation, policies and initiatives including:
Children (Scotland) Act 1995
Curriculum for Excellence
Getting it Right for Every Child (GIRFEC)
Supporting Children's Learning Code of Practice 2017
Education (Standards in Scotland's Schools, etc) Act 2000 Education (Additional Support for Learning)(Scotland) Act Children and Young People (Scotland) Act 2014
UN Convention for the Rights of the Child (UNCRC) The Early Years Framework
Equality Act 2010
It does not, however, include the UNCRPD, which has principles such as "full and effective participation and inclusion in society" and "respect for the evolving capacities of children with disabilitiles and respect for the right of children with disabilities to preserve their identities" (UN, 2006: 5)
Furthermore, Article 24 of the UNCRPD specifies what inclusive education might look like in UN countries, with very clear guidance on the expectations of trained teachers for delivering this (UNICEF, 2017)

It seems unfortunate, then, that the UNCRPD's explicit goal that an inclusive education "accommodates all students whatever their abilities or requirements at all levels" (UNICEF, 2017: 3) where there is a similar rationale of the NFI "to meet the increasingly diverse needs of all children within schools in Scotland (SUIG, 2022: 6).
Recently, the UNCRC (but again, not the UNCRPD) was incorporated into domestic law in Scotland, making a somewhat positive move towards shifting the legislative focus back to social justice, children's rights and a genuinely inclusive education system (Couper-Kenney and Riddell, 2021).
Had the UNCRPD been incorporated, however, Scottish legislation would perhaps have benefitted from a firm idea of what is (and is not) considered inclusion, as found in the UNICEF guidance on inclusive education in the UNCRPD:
Inclusion: education environments that adapt the design and physical structures, teaching methods, and curriculum as well as the culture, policy and practice of education environments, so that they are accessible to all students without discrimination. Placing students with disabilities within mainstream classes without these adaptations does not constitute inclusion.
UNICEF, 2017: 3
(Emphasis added)
Does this definition challenge your own perception of inclusion any in way?

Does it sound like a definition that could be applied to Scottish inclusive education policies and practice?

Olsson and Nilholm (2022) illustrate four different interpretations of inclusion within education, from different perspectives:
A ‘placement’ definition of inclusion is where the child’s ‘mere presence’ within the classroom is considered inclusive, and despite numerous arguments to the contrary, this definition remains commonplace.
A ‘community’ definition of inclusion is where all children are valued and share a sense of belonging, with an inclusive community throughout, democratic and equitable for all - the ultimate inclusive education.
Somewhat straddling these two definitions is the individualisation definitions, both specified and general.
Whilst generalised individualisation aims to meet the needs of all the pupils in the class, the specified individualised definition of inclusion focuses on appropriate placement plus meeting the specific needs of individual children with disabilities and ASN.
Within this course, the latter definition is seen as the bare minimum expectation of successful inclusion, with the community definition being the ultimate threshold of expectation.
It is a goal to be worked towards by all, and in creating this community, the teacher
is building a space in which all… are enabled to speak; to voice their struggles, confusions, and discontinuities in learning; to have their opinions heard and respected; and to have opportunities to explore and expand their horizon of meaning.
Murdoch, English, Hintz and Tyson, 2021: 675
Within a genuinely inclusive education, it should be recognised that play, for example, is a human right.
Whilst the UNCRC requests that inclusive spaces should be made available to all children, including those with disabilities and ASN (Committee on the Rights of the Child, 2013), inclusive education should not be just about providing access or time to play, but…
…it is about creating the conditions for play… it requires that we support children’s ability to play, create opportunities for children to be playful, and understand that play is where children are able to exercise choice and control.
Howard and McInnes, 2013: 195

All children and young people in Scotland should be able to enjoy (not just access) high quality play opportunities, including free play, every single day within education (Casey et al, 2015).
Children with ASN and disabilities should be given the support and understanding they need to positively engage in play.
Barriers to inclusive play may be faced in part due to a lack of skilled staff, purported additional costs, and a number of attitudinal issues, according to Button (2014).

The term ‘inclusive play’ itself appears to mean different things to different people, therefore the perceived barriers can vary accordingly.
One way that appears to fit with the community interpretation of inclusion, is the children’s equal right:
To full, satisfying play in their day to day lives;

To make choices about which, if any, local provisions they would like to take part in;
To play provision which adapts to the changing needs of the children rather than expecting the children themselves to 'fit in'
Casey, 2005, in Button, 2014: 7
The Committee on the Rights of the Child (2013) express concern about the challenges faced by children with disabilities and ASN to enjoy play opportunities. In particular, the specific barriers of creating time and space for spontaneous play and creativity, and a lack of positive attitudes towards this.
Within education, school staff must start recognising that play should be valued as both a child's right and also a means of enabling their own development. Awareness-raising among professionals and peers at school is essential, so that children with ASN and disabilities can be equal and active partners in play and: Pro-active measures are needed to remove barriers and promote accessibility to and availability of inclusive play opportunities for children with disabilities to participate in all [play] activities.
Committee on the Rights of the Child, 2013: 16
This equality is imperative for education (and play) to be inclusive, and must go hand in hand with dignity and respect for each and every child, to be socially just (Hedge and MacKenzie, 2012).

Module two (Part one):
Inclusion and Children's Rights in Scotland
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Pause the screen and ask yourself:
What are you learning?
How are you doing?
How do you know?
How can you improve?
Where do you go for help?

Use these 5 critical questions to shape your

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Module two (Part two):
Children's
Capabilities and
Inclusive Play
in Scotland
Written and presented by Elise Guthrie Stirling
Embracing Authentic Autistic Play Series

Module two (Part two): Children's Capabilities and Inclusive Play in Scotland
Learning Outcomes
Before we start:
All of the spoken information you are about to hear will be on screen within the text, for accessibility.
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You will be asked a brief question - this is for your benefit to help you self-assess your understanding.
If you have any accessibility issues, or require this information in a different format, please email elise.stirling@strath.ac.uk
Lastly, I just want to say thank you for joining me! During part two we are learning to:
Take a critical look at the Capabilities Approach with regards to equality.
Consider how agency and choice in play might impact inclusion.
Think about whether the presumption of mainstream provision maximises dignity, equality and inclusion.
At the end of part two you should be able to:
Identify some features of the Capabilities Approach as well as some potential limitations for inclusion.
Reflect on the potential influence of adults' behaviour on inclusive play.
Recognise potential opportunities for maximising dignity, equality and inclusion.
Embracing Authentic Autistic Play Series

life
bodily health
bodily
integrity
senses (imagination and thought)
emotions practical reason
affiliatio
n other
species
play

control over one's environment

The Central Capabilties - Nussbaum, 2011: 33-34
Some people explore answers to questions about inclusion- and social justice-related issues such as dignity, respect and equalities through a Capabilities Approach (Hedge and MacKenzie, 2012).
Martha Nussbaum's Capabilities Approach was developed as a social justice framework, borne out of "her genuine concern to devise a theory of justice that includes groups that are frequently marginalised" (Begon, 2017: 3).
Originally based on a similar concept by Amartya Sen, an economist, Nussbaum developed her version from a more philosophical standpoint on universal rights.
Nussbaum was concerned with the bare minimum standards of human dignity and how this can be actualised through a recognition of each person's capabilities (Nussbaum, 2011).
Whilst some agreement between the two approaches exists, one thing that Nussbaum took further than Sen was to explicitly list and define ten specific capabilities. Embracing Authentic Autistic Play Series
Children's Capabilities and Inclusive Play

Sen instead left it up to the individual person or society to determine their own values and priorities (Stewart, 2013).
Sen disagreed that the capability approach is a suitable framework for social justice, as a just society would pursue a consensus of values that are more contextually relevant, and a list of acceptable capabilities cannot be universally determined by one person.
Hedge and MacKenzie (2012), therefore, argue the ten central capabilities could (and should) be contextually sensitive, and will fluctuate depending on interaction with the environment.
Embracing Authentic Autistic Play Series
Core to the Capabilities Approach (for both Sen and Nussbaum) is the idea of prioritising human dignity and agency.
It seems, however, that Nussbaum's somewhat paternalist dictation of priorities is potentially in contradiction to this (Stewart, 2013).
Nussbaum's Capabilities Approach may be laudable to an extent, for potentially changing how goals and priorities can be strived for by individuals and institutions.
However, Stewart (2013) highlights that numerous criticisms of the framework exist, preventing the approach from having the effect that Nussbaum intended.
Children's Capabilities and Inclusive Play

For example, the role of social and cultural norms and expectations, the role of religious beliefs and personal agency within religion, and political change such as the erosion of the welfare state, all have a potential impact on how the central capabilities are developed but are not sufficiently addressed by Nussbaum.
Despite Nussbaum claiming that her Capabilities Approach is akin to human rights approaches, it can be argued that it fails to address critical human rights entitlements, and it
fails to explain something critically important captured in international human rights law: that every person be treated as having equal status… the reason for failure is that the value of equality cannot be fully articulated in

the language of capabilities alone. Capabilities are not the only thing that matter.
Barclay, 2016: 385
Furthermore, Stewart (2013) criticises Nussbaum's limited scope for individual and community influence over the defined list and what it means for each person or the society in which they live.
He calls this her 'Tiger Mother' approach, which implies a strict, no-nonsense application of rules and norms in an effort to maximise success.
It appears doubtful that Nussbaum's Capabilities Approach can fully account for universal human rights.
It fails to capture basic equalities that international and localised human rights conventions aim to protect and promote (Barclay, 2016).
Therefore, Nussbaum's Capabilities Approach is unlikely to successfully realise or support an inclusive education on its own.
Embracing Authentic Autistic Play Series

Embracing Authentic Autistic Play Series
One final (yet important) criticism of Nussbaum's Capabilities Approach is the claim that human rights are, like the ten capabilities, a simple matter of having choice (Barclay, 2016).
However, some (if not all) human rights are neither explained or justified by the existence of individual choices or opportunities.
Using 'play' as an example of a concept that spans both Nussbaum's Central Capabilities and human rights (specifically the UNCRC), play should of course never have the barriers of choice or opportunity (Howard and McInnes, 2013).

However, equality in play cannot come from the mere access to choice and opportunity (such as simply being given a 'playtime' at school) alone, according to Sterman et al (2020).
Choices, freedoms, and opportunities in play, must be meaningful and personal.
Often school staff may interfere with these opportunities:
When the children found activities to play, their play was often stopped through enforcing rules, 'Ahmed, no sticks…', or through mothering actions. A teacher told Nathan, who was happily spinning around a pole with a peer, 'You are going to get sick and fall over, go play on the grass.'
Sterman et al, 2020: 590

Casey et al (2015) found similar examples in their report on inclusive play in Scotland, with "overly strict rules for wet play and accidents… that lead to children being told off - for playing!" (p32).
They recommended, among several other targets for a play strategy for Scotland, that teachers and other school staff are educated on the nature of free play, as well as equalities training for all members of the school community.
A concerted effort must be made to consider and follow through with children's feelings of control over their play, regardless of difference, in order to be inclusive (Howard and McInnes, 2013).
By taking over or redirecting their activities, it then ceases to be play anymore. This is what is expected within the UNCRC, and it is this that fails to be captured by Nussbaum.
Despite seemingly being hinted at in the final capability 'control over one's environments' (Nussbaum, 2011), only political and material control is suggested. Play' is somewhat limited to simply enjoying recreational activities

and laughing. The capabilities fail to have any useful indication of what should be aspired to for this capability in order to be socially just or inclusive in schools.
Embracing Authentic Autistic Play Series

The Standards in Scotland's Schools Act 2000 states that education must be directed to the development of the personality, talents and mental and physical abilities of the child or young person to their fullest potential.
Scottish Parliament, 2000: Section 2
John Swinney, the Depute First Minister for Scotland and Cabinet Secretary for Education at the time of his foreword, said himself that the mere presence of a child in mainstream should not be the primary indicator of successful inclusion. It is the experiences of children that are key to a genuinely successful education (Scottish Government, 2019).
Mary Warnock, the name behind the Warnock Report, caused 'outrage' in 2005 when she turned the tables on her own recommendations.
She stated grouping 'special educational needs' into one category, expecting everyone to be integrated together, turns a blind eye to individual differences that need to be acknowledged in order for successful learning to happen in schools (Hedge and MacKenzie, 2012).
To treat all children the same, according to Hedge and MacKenzie (2012), runs the risk of failing to provide appropriate supports to convert into capabilities, perpetuating disadvantage and injustice, even if focusing too much on individual difference is criticised for creating potential stigma.
Embracing Authentic Autistic Play Series

Embracing Authentic Autistic Play Series
Instead, focusing on individual dignity can be key to successful inclusion, regardless of where they are most likely to learn and flourish best.
Warnock reversed her original recommendations to instead state that inclusion "should mean being involved in a common enterprise of learning, rather than necessarily under the same roof" (in Hedge and MacKenzie, 2012: 338).
Rather than unequivocally advocating for either mainstream schooling or specialist provision, it is a deeper consideration of what will maximally enable each child and allow them the dignity that will better facilitate true inclusion.
The equalities expected in education (regardless of whether it follows Nussbaum's framework or not) should not necessarily mean that all children must attend a mainstream school following an unmodified curriculum.
Instead, an equal education may indeed be a specialised curriculum in a non-mainstream setting, if that space allows the maximum dignity, support, and potential for positive outcomes to which they are entitled (Hedge and MacKenzie, 2012).
While some may perceive an alternate provision limiting in terms of function and capabilities, Begon (2017) highlights that there are some circumstances in which individuals may ostensibly lack the function to perform Nussbaum's central capabilities, yet still perceive their lives to be dignified.
It stands to reason, therefore, that dignity should be the focus for considerations of appropriateness of education placement and provision, regardless of subscribing to a capabilities approach or not.
This is, after all, one of the main priorities of of Nussbaum's social justice framework.

Module two (Part two): Children's Capabilities and Inclusive Play in Scotland
Learning Outcomes
During part two we were learning to:
Take a critical look at the Capabilities Approach with regards to equality.
Consider how agency and choice in play might impact inclusion.
Think about whether the presumption of mainstream provision maximises dignity, equality and inclusion.
At the end of part two you should now be able to:
Identify some features of the Capabilities Approach as well as some potential limitations for inclusion.
Reflect on the potential influence of adults' behaviour on inclusive play.
Recognise potential opportunities for maximising dignity, equality and inclusion. Embracing Authentic Autistic Play Series

Pause the screen and ask yourself:
What are you learning?
How are you doing?
How do you know?
How can you improve?
Where do you go for
help?

Use these 5 critical questions to shape your

reflections. References

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Module three:
Embedded ideas of autism and play interventions
Written and presented by
Elise Guthrie Stirling
Embracing Authentic Autistic Play Series

All of the spoken information you are about to hear will be on screen within the text, for accessibility.
Please do not feel you have to write everything down, but do feel free to jot notes when you find something particularly meaningful or relevant.
There is no formal assessment for this course but you are expected to critically reflect on the module content and record this in the next section of the app, and continue critical reflection in practice.
You will be asked a brief question - this is for your benefit to help you self-assess your understanding.
If you have any accessibility issues, or require this information in a different format, please email elise.stirling@strath.ac.uk
Lastly, I just want to say thank you for joining me! Embracing Authentic Autistic Play Series
During module three we are learning to:
Take a critical look at the history of autism interventions in play.
Consider the impact of behaviourally- and medically- based interventions for autism.
Reconsider long-held notions of autism and autistic play. At the end of module three you should be able to:
Identify some key features of embedded ideas of autism and play interventions.
Recognise the potential for harm that lies within these traditional (and modern hybrid) approaches to autism and play intervention.
Critically reflect on your own practice and begin to consider potential opportunities for adapting this practice for autistic pupils.
Before we start:
Module three: Embedded views of autism and play interventions
Learning Outcomes

Kanner and Asperger first detailed descriptions of ‘autistic aloneness’ and ‘insistence on sameness’ over 70 years ago.
According to Dyck and Russell (2020), “essentially the [autism] diagnosis depends on a deficits-based description of a person” (p171) using only behavioural markers to diagnose it.
Clinicians rely heavily on culture, context and their own individual values to come to that conclusion.
This creates a concern that the diagnostic criteria has been influenced by those with a ‘vested interest’ in treatments, and is susceptible to gatekeeping and pathologising.
Embracing Authentic Autistic Play Series
Autism has often been viewed as a purely medical condition, a tragedy akin to any other disease that needs to be cured (Chapman and Bovell, 2022).
According to Milton (2014), this is the one thing that does not, and will not,

work.
In the leading diagnostic manual and in general practice, autism has been seen to create behavioural problems stemming from dysfunction of the individual.
It is viewed as a spectrum disorder associated with "social and communication issues coupled with highly restricted and repetitive habits, actions and routines, and sensory sensitivities" (Chapman and Bovell, 2022: 4).

This view illustrates the behaviour-based approach to autism, with dominant models often based on the work of behaviourist Lovaas and his colleagues.
These approaches are, according to Chapman and Bovell (2022), highly controversial and potentially harmful.
In 2011, the obituary of Ivar Lovaas described how his work "revolutionized the treatment of autism" where it had "previously been considered untreatable" (Koegel, 2011: 227).
The American Psychological Association tribute suggested that his work challenged ideas that the 'disorder' was 'hopeless'.
Despite encouraging practitioners to use 'extremely punitive' measures including electric shock to 'motivate' autistic individuals, his work has been considered 'remarkable', 'groundbreaking' and 'profoundly important'.
Koegel (2011) goes on to suggest that Lovaas' work is firmly established within autism practice and "literally all current treatments for autism trace either a primary or secondary dimension… to his crucial foundational research" (p227).
At 83 years old, he died having purportedly shaped the lives of practically every autistic child in the world, with much of his world.
Much of his work is known to education and psychology professionals across the world, through his contribution to the creation of Applied Behavioural Analysis (ABA).
Any insight into Lovaas' generally practiced methods, even without the 'extremely punitive' measures, gives a taste of what Chapman and Bovell (2022) referred to as controversial.
The glowing tribute made to Lovaas in his obituary highlights how embedded notions of autism paint the 'treatment' of autism as a noble and necessary endeavour, without which the lives of autistic individuals would be adrift and without 'normal' life functioning.

As an example:
The Lovaas approach is a form of Applied Behavioural Analysis in which the Lovaas trainer models to the child a skill to be mastered, such as placing one brick on top of another, and then encouraging the child to replicate the action… Eye contact is requested using a prompt of tilting or directing the child's head if necessary, and the request for the child to complete the task is repeated until success has been achieved.

Success is always positively rewarded, often by a small item of favoured food and activity-specific verbal feedback, such as 'Good brick building!' For the child who fails or does not wish to attempt the task, a firm verbal comment can be made such as 'No!'...
In the early stages, this may result in bouts of continued screaming and constantly leaving their seat. The trainer would reposition the child at the table.
Wall, 2010: 85

His notoriety as some nobleman of autism intervention somehow follows being a man who made statements such as "you start pretty much from scratch with an autistic child"
and…
"You have a person in the physical sense - they have hair, a nose and a mouth - but they are not people in the psychological sense"
Lovaas, 1974, in Botha, 2020: 5

For those who hold a different viewpoint about Lovaas' work, and about ABA in general, such as autistic (or ally) researchers and professionals, instead of a glowing tribute, this academically published obituary serves as a reminder of the uphill battle against the types of views perpetuated by followers of Lovaas and ABA.
This includes "the cliche of ABA being the only 'scientifically proven' intervention" (Motton, 2017: 815).
Despite ABA being extolled as gold standard, it and other similar interventions focus on deficits, remediation, and cure, being rooted in a medical model that strives to 'normalise' the individual to act more like others (Botha, 2020).
This medical model
assumes that the goal of service provision or 'treatment' is to restore autistic people to normalcy, or, as Lovaas puts it, indistinguishability from peers.
Kapp and Ne'eman, 2020: 188/9

ABA, according to Dillenburger and Keenan (2009), is based on over 100 years of research, and its underpinnings can be found in the history of behavioural psychology, such as Skinner's operant conditioning.
It aims to generate measurable change in human behaviours, and although it is not specific to autism, thanks to it being credited to Lovaas and his approach, it has come to be "mistakenly categorised as a therapy for autism" (Dillenburger and Keenan, 2009: 194).
The 'vast array' of approaches that are based on ABA vary widely, and some are even at complete odds with each other (Milton, 2014).
ABA is often seen as a 'traditional' approach to autism intervention, with numerous more 'contemporary' approaches cropping up that purportedly cross-fertilise with behavioural practice.
This includes developmentally-based programmes that 'infuse' ABA tenets into their makeup, creating a continuum of interventions that are more or less based on ABA approaches (Prizant, Wetherby, Rubin and Laurent, 2003).

With these cross-infusions, the theoretical basis for the interventions remains rooted in the behaviourist camp, with a core belief that "the less autistic the child is at the end of the intervention, the more successful the intervention is" (Mottron, 2017: 816).
However, the underlying principles, the efficacy, and the ethical justifications are now being widely questioned (Mottron, 2017) and ABA in particular faces considerable scrutiny (McGill and Robertson, 2021).
Dawson and Fletcher-Watson (2021) report on earlier reviews of interventions that indicate the research behind ABA and ABA-based interventions rarely, if ever, consider adverse outcomes or harms of interventions on autistic individuals.
Nor were such adverse outcomes ever documented or reported against the benefits that the studies purportedly evidenced.
Those coming forward to report negative consequences of ABA faced backlash and were either:

"ignored, or dismissed as 'radicals', 'too autistic' or 'not autistic enough' to speak for their own community"

McGill and Robertson, 2021: 270

Often, such debates are 'hidden from view' within the field, giving the misleading impression that everyone agrees with such approaches (Milton, 2014). The poor standards and hoodwinking, according to Dawson and Fletcher-Watson (2021), demonstrates the bias and deceit that has plagued autism research and practice.

This then perpetuates notions that autistic pain, fear, distress, sadness and excited mannerisms are problematic or challenging behaviours that need to be extinguished rather than genuine emotional responses to harmful practices. Consequently, "disregard of harms has in turn been wrongly been interpreted as evidence of no harms" (Dawson and Fletcher-Watson, 2021: 2), and the resultant practices have gone unchecked for decades.

Play is one aspect of an autistic child's expereinces that is particularly vulnerable to being targets with interventions, with the embedded idea that "professionals and caregivers may identifydelays and seek to facilitate early play skills through early intervention strategies" (Wilson et al, 2017: 10)

Autistic play is fundamentally different to the play of non-autistic peers. Notably, it is even different to peers at a similar skill level in terms of language and cognition due to Down Syndrome or learning disabilities, for example (Westby, 2022; Kossyvaki and Papoudi, 2016).

Thus, differences cannot simply be explained away by disordered development. Conventional developmental sequences such as solitary play, parallel play, group play, and so on, do not necessarily apply to autistic children and research indicates that children with [autism] differ from [typically developing] children in all of the aforementioned aspects of external play performance as well as the internal experience of playfulness.

Westby, 2022: 333

Despite these differences being unique to autism, instead of being celebrated as such, they are perceived instead to be 'lacking', 'limited', 'odd', and at a 'lower level' than their peers (Papoudi and Kossyvaki, 2018).

The literature on autistic play, much like that of autism research in general, is largely based on a deficits model.

According to Lang et al (2009), "play is an important area of intervention" and "this focus is important because children with autism are known to have more profound and global deficits in play" (p482).

Play is a central component of many behavioural interventions, and although many have primary goals of developing language, cognition and social skills, some focus on developing play skills in particular (Westby, 2022).

Founded on ABA principles, many play interventions attempt to 'teach' basic acts of play, and "these notions… specifically in the development of play, have become the core of psychoeducational models" (Papoudi and Kossyvaki, 2018: 10).

There is a belief that (similar to Lovaas' 'noble and necessary endeavour') children will not reach their full potential without adults intervening in their play.
Of less concern, it would appear, are notions such as pleasure, fun, creativity, deversity and inter-subjectivity (Kossyvaki and Paoudi, 2016).
Children are instead offered a 'pleasant consequence' if they demonstrate the target play behaviour, rather than the play itself being intrinsically pleasant (Lang et al, 2009).
According to Rust and Thanasiu (2019), "children, including those with [autism], are intrinsically motivated to engage if those interventions are enjoyable" (p191). While some interventions are different to ABA in their methods and targets, the focus remains on correcting deficits in play rather than allowing play to be enjoyable in its own right.

The goal of play-based interventions is to correct the 'developmental lag' of autistic children's play, as well as target the qualitatively distinctive characteristics of their play.
Despite claiming to be in the best interests of the child, these interventions and many others perpetuate the same notion that autistic play and associated behaviours are rife with problems to quash and struggles to overcome (Rust and Thanasiu, 2019).
The issue with many autism interventions (not just the most dominant ABA and ABA-based approaches) is that they are fundamentally flawed simply by holding these views (Chapman and Bovell, 2022).
Consequently,
In attempting to steer someone away from their core identity because it clashes with restricted and oppressive social norms… [it] seeks to normalize autistics instead of helping them achieve self-actualisation.
Chapman and Bovell, 2022: 1526
There are efforts in Scotland to overcome barriers to play through inclusion and acceptance, and seek to provide a "connected approach to equality in play… to reduce the negative factors which hold back high quality play opportunities" (Casey et al, 2015: 2).

As a result, such efforts might call for "the old goal of making autistic people 'indistinguishable from their peers'...
to be jettisoned"
(Milton, 2015: 12).

Module Three:
Embedded ideas of autism and play interventions
Learning Outcomes
During module three we have been learning to:
Take a critical look at the history of autism interventions in play.
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Identify some key features of embedded ideas of autism and play interventions.
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hybrid) approaches to autism and play intervention.
Critically reflect on your own practice and begin to consider potential opportunities for adapting this practice for autistic pupils.
Embracing Authentic Autistic Play Series

Pause the screen and ask yourself:
What are you learning?
How are you doing?
How do you know?
How can you improve?
Where do you go for help?
Use these 5 critical questions to shape your reflections.

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Module Four:
Historical Insights
into Autistic Play
Embracing Authentic Autistic
Play Series
Written and presented
by Elise Guthrie
Stirling

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You will be asked a brief question - this is for your benefit to help you self-assess your understanding.
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Lastly, I just want to say thank you for joining me! Embracing Authentic Autistic Play Series
During module four we are learning to:
Consider alternative views to the dominant discourse of autistic play found in post-war France.
Contemplate ways in which Deligny and other pioneering individuals were able to reject the dominant discourse.
Take stock of Deligny's view of, and approach to, autistic play and relate this to your own professional experience.
At the end of module four you should be able to:
Identify key features of radical acceptance of autistic play, such as Deligny's Cèvennes tentative.
Reflect on the potential of embracing radical acceptance to reject the dominant discourse within your own context.

Determine if there are opportunities to align Deligny's view and approach with your own professional values.
Before we start:
Module four: Historical Insights Into Autistic Play Learning Outcomes

Radical acceptance of autistic play - a history
Before the dominant discourse of autistic play - the ideas such as disorder, deficiency and deviance - completely took hold of education and child care, alternative views existed that radically accepted autistic play as it was.
In post-war France, the 'interventionalist' behaviourist approaches had begun to make their way into education and care, driving professionals to make attempts to normalise or fix autistic children and their actions.
However, clusters of pioneering 'anti-establishment' schools and compounds for autistic children sought to de-institutionalise their care and provision.
The efforts of these pioneers expanded the boundaries of childhood, becoming more inclusive and transformative, opposing the rigid institutionalisation of autistic children at a time when others sought to dehumanise, overpower, and experiment on them (Briggs, 2019).

Radical acceptance of autistic play - a history
Maud Mannoni, for example, sought to focus on shifting attitudes away from authoritarian, institutional approaches of treatment and towards relationships-based care (Wustefeld and Johnson, 2019).
She developed ideas on 'play' that challenged assumptions about what is normal for children, whilst working at a hospital in Antwerp during the second world war.
Furthermore, she began embracing some early notions of a social model of disability, speaking out against assumptions that les enfants inadaptes were lesser human beings (Briggs, 2019).
Mannoni came to think of play "as a creative space that allowed children to access and express imagination" being "inclusive of disabled children… [who] did not need to exhibit specific types of play" (Briggs, 2019: 57).

Radical acceptance of autistic play - a history
By 1969, she had created a school based on her post-war ideas, an environment in which autistic children could be cared for and educated within and outwith the walls of the school, to explore their own interests and pursue desires (Wustefeld and Johnson, 2019).
The Bonneuil-sur-Marne school mainly catered for children with limited verbal communication, who did not show typical social and imaginary play.
Noting the particular distressed that conformity to normative standards caused these children, they did not subscribe to a specific, rigid pedagogy.
Mannoni did not attempt to change the behaviours of the children at the Bonneuil, but
She instead articulated an alternative form of play that was more inclusive of nonobservable behaviours and forms of individual creativity as genuine examples of play.

Briggs, 2019: 58

Radical acceptance of autistic play - a history

Fernand Deligny was similarly pioneering, having previously worked as a specialist teacher with so-called 'delinquents', attempting to keep them out of institutions after the war (Gunn, 2021).
Deligny set up a centre of sorts, much like Bonneuil, which acted as a specialised residential compound in France (Wustefeld and Johnson, 2019).
He received an influx of pupils from Maud Mannoni and like-minded colleagues such as Francois Dolto and Emile Monnerot in the late 60s.
Deligny's attempt in the Cèvennes aimed to alleviate expectations placed upon them to conform to norms and remove any inclination to 'compensate' for their so-called deficiencies (Krtolica and Sibertin-Blanc, 2009).

Radical acceptance of autistic play - a history
The 'interventionist' approach that had begun emerging - that sought to normalise autistic children - was completely rejected within the campus.
Emphasised, instead, was the importance of freedom and exploration to "play beyond the confines of typical educational and social practice" (Briggs, 2019: 58).
The children, otherwise presumed to require institutionalisation, viewed as uncontrollable, primarily non-speaking, and in medical model terms would likely be considered 'profoundly autistic' (Gunn, 2021).
Deligny, however, rejected all such categorisations, and considered the children, himself, and the other adults in the compound to have defected from society as opposed to being seen as social defects, according to Gunn (2021).

Radical acceptance of autistic play - a history
In the Cèvennes, there existed a 'common', areas in which the adults and children inhabited, sometimes together, often separate, and the children would often wander. These wanderings captured Deligny's interest and though the children's freedom allowed them to journey wherever they chose without interference, there too existed the chevêtres, the cross-beams.
These were
a point in space, where the adults' journeys and the children's wander lines cross each other (are entangled); a specific spot… where their acts coincide.
Gunn, 2021: 4

Pause a moment to reflect and have a break…

How can we use radical acceptance in

practice?
These chevêtres, the specific crossover points, may be key for teachers learning to occupy space with, and engage with, an autistic child - while given them their own freedom to 'wander' during play.
Briggs (2019) called this 'reinventing play', and Deligny's tentative attempt allowed free, unfettered play.
Deligny did this without disturbing the children or their expressions, which clearly "differed dramatically from how play was envisioned within traditional notions of education and the discourses of childhood" (Briggs, 2019: 47).
He mapped their wander lines, paying close attention to potential overlaps, repeated gestures, and points of preference such as water (Gunn, 2021).

How can we use radical acceptance in practice?
According to Briggs (2019), this mapping of movements demonstrated to Deligny

that these children did indeed play.
They were deliberate with their actions, it just simply did not look like what had come to be known as normal play.
He felt it was the "limited inventory of play, which focuses on the social needs of society" that was the problem, not the play itself (Briggs, 2019: 59).
Deligny embraced the "just-thisness of autistic children's lives" (Brighenti, 2018: 46) - a beautiful summation of how he and his colleagues observed the children at play.

How can we use radical acceptance in practice?
They did so without interference or direction, adapting their own behaviours to allow new forms of social expression, and gave them back their humanity (Briggs, 2019).
Through this radical acceptance of authentic autistic play, Deligny may have unlocked the answer to how autistic children and young people could or should be allowed to be.
According to Wiame (2016), Deligny held the view that autistic children often thrive far more than others on experiences, interactions, and connections with non-human elements of life.
Things that make life more 'vivid' for them; the sensory inputs and material items, the natural and non-natural substances that attract their attention and fascination.

How can we use radical acceptance in practice?
To the onlooker, the use of voice, gaze, gesture and movement of the autistic children at the Cèvennes may have been perceived as odd or meaningless, but they do mean something, and they do express something. However, what is signified cannot be grasped by existing ideologies, ways of behaving, or traditional discourses.
Masschelein and Verstraete, 2011: 1198

How can we use radical acceptance in practice?
Sinclair (1993, in Milton, 2016) notes that there needs to be a dignity in how neurotypical people approach autistic behaviours, by meeting them halfway, on their own terms, and building bridges between their equally alien ways.
Milton (2016) illustrates that Deligny and colleagues rejected the idea that autistic ways of being were just unfathomable versions of normal.
Instead, they were looking for ways that they could turn away from dominant discourses, exist beyond them, and forget the idea that autistic behaviours are somehow scrambled messages that need decoding.
Deligny's philosophical notions have the potential to inspire change in the way that autistic play is viewed.

How can we use radical acceptance in practice?
In finding similarities within Deligny's writing and that of autistic authors, Milton (2016) believes that this can develop and grow into a sound, believable foundation for thinking about autism.
Using Deligny's philosophy within a play pedagogy might have the potential for guiding teachers towards managing realistic expectations and promoting the acceptance and 'just-thisness' of autistic play.
As such, we can consider how Deligny's view of, and approach to, autistic play

might align with professional standards - including our own professional values - and how we can learn from the opportunities this provides us with as teachers and play pedagogues.

Embracing Authentic Autistic Play
Series During module four we were
learning to:
Consider alternative views to the dominant discourse of autistic play found in post-war France.
Contemplate ways in which Deligny and other pioneering individuals were able to reject the dominant discourse.
Take stock of Deligny's view of, and approach to, autistic play and relate this to your own professional experience.

At the end of part two you should now be able to:
Identify key features of radical acceptance of autistic play, such as Deligny's Cèvennes tentative.
Reflect on the potential of embracing radical acceptance to reject the dominant discourse within your own context.
Determine if there are opportunities to align Deligny's view and approach with your own professional values.
Module four: Historical Insights Into Autistic
Play Learning Outcomes

Use these 5 critical questions to shape your

reflections. Pause the screen and ask yourself:
What are you learning?
How are you
doing? How do
you know?
How can you improve?
Where do you go for
help?

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Authentic Autistic Play Module Five:
Written and presented by Elise Guthrie Stirling

Before we begin…
Embracing Authentic Autistic Play Series
All of the spoken information you are about to hear will be on screen within the text, for accessibility.
Please do not feel you have to write everything down, but do feel free to jot notes when you find something particularly meaningful or relevant.
There is no formal assessment for this course but you are expected to critically reflect on the module content and record this in the next section of the app, and continue critical reflection in practice.
You will be asked a brief question - this is for your benefit to help you self-assess your understanding.
If you have any accessibility issues, or require this information in a different format, please email elise.stirling@strath.ac.uk
Lastly, I just want to say thank you for joining

me! Let's go!

Module Five:
Authentic Autistic
Play Learning
Outcomes
Continue to critically examine the dominant discourse around play and autism.
Consider the role of autonomy and liberty in playing authentically within their own preferred play.
Explore the possibility of a uniquely autistic play culture with qualitatively different play from their peers.
In module five we are learning to:
Further identify presumptions around autistic play and how these may impact a child's wellbeing.
Recognise how much autonomy and liberty may be given to other children compared to autistic children and the potential effect of this.
Think about maximising authentic play in your context, that accounts for not only individual preferences but perhaps a wider autistic play culture..
By the end of module five you should be able to:
Embracing Authentic Autistic Play Series

Play: typical, atypical and everything in between
Embracing Authentic Autistic Play Series
All around us, we persistently get the message (implicitly or explicitly) that typicality is preferable to atypicality.
However, we have to avoid falling into the trap of assuming that 'normal' is better, according to MacCormack (2020).
It is increasingly recognised now that "we too often seek to mould the

behaviours of children with [autism] into that which is typical" (Howard and McInnes, 2013: 184).
Even when play is not typical, according to Gerber (2017), children must benefit from freedom and internal motivation in their actions in order to experience authentic play.
Practitioners and researchers ought to stop designing programmes of intervention to make autistic children 'normal' and start making programmes to make their lives better.
Anything other than this fails to make meaningful changes in the lives of autistic children, often being designed to accomplish the wrong goals, according to MacCormack (2020).
Hancock (2020) highlights that many categorisations of play and play frameworks are designed around normative presumptions based on descriptions of neurotypical children's play.
Generally, neurotypical children do not demonstrate the same play actions as autistic children, and autistic play is not illustrated within measures of successful or acceptable play behaviours.
This is potentially due to professionals having a desire to extinguish or alter the play actions of autistic children, and they fail to make it into the standardised measures (Hancock, 2020).

The lost meaning of play
Settings may be using 'play' activities for targeted intervention, or seeing play as something that can be removed as punishment or given as a reward (Mulder et al, 2019).
There are concerns that potentially practitioners and researchers may have lost sight of why children play and indeed what play really is (Luckett, Bundy and Roberts, 2007).
According to Howard and McInnes (2013), a concerted effort must be made to ensure that choice, control and freedom are maintained in play.
This should be the case regardless of disability or difference, and staff should be trained in understanding that it should be done inclusively, and how to do this.
Embracing Authentic Autistic Play Series
Within the United Nations, the right of a child to pay has legal standing (Children and Young People's Commissioner, 2021; Howard and McInnes, 2013; Eisele and Howard, 2012, etc).
Mulder, Graf and Carter (2019) point out that Article 31 of the UNCRC presumes that play must be age-appropriate (which may not always be the case for autistic children).
There should be a general understanding, however, that play should be recognised as being intrinsically motivated, freely chosen, personally directed, consisting of their own ideas, and done in their own way to their own ends (Howard and McInnes, 2013).
Despite this right, it appears that in some settings, the true meaning of play has been lost.

The inclusive play environment
An inclusive play environment must have flexible, child-centred practices in play, responsive to individual needs, and facilitate freedom over what, why and with whom the child plays (Howard and McInnes, 2013).
Additionally, inclusive play could mean that measures of successful or acceptable play should also include play actions and behaviours commonly

displayed by autistic children, and not solely those most often demonstrated by neurotypical children (Hancock, 2020).

Play and fun should not be sacrificed, for the sake of the child's happiness and wellbeing, regardless of what neurotypical assumptions exist.

Furthermore:
some children with autism prefer to play alone and can find play with other children uncomfortable or even distressing, and this should be respected.
Papoudi and Kossyvaki, 2018: 15
Embracing Authentic Autistic Play
Series

The harms of inauthenticity
If an autistic person is unable to live their life authentically, their wellbeing is likely to be harmed.
This includes when the autistic person is restricted in some way by neurotypical assumptions.
(Späth and Jongsma, 2020)
Poor wellbeing can be the result of submitting to the needs and wants of others - eg societal norms.
Expectations should therefore be shifted and interventions adapted to reframe what the autistic person 'ought' to do (Bottema-Beutel, Park and Kim, 2017).
This moves us "beyond the deficit-based goal of fixing problems" and instead "looks to determine what is necessary for holistic and genuine wellbeing" (MacCormack, 2020: 3).
Embracing Authentic Autistic Play Series

Autonomy and liberty
Core to this wellbeing, according to Späth and Jongsma (2020), is the notion of liberty - both positive and negative liberties.
Positive liberties are the carrying out of one's own desires and preferences, and negative liberties are the opportunities for non-interference from others.
Both types of liberty can play a role in fostering autonomy and authenticity. To allow a child to be autonomous in play, the people working with the child (ie the 'grown-ups') should pass the locus of control to the child.
This permits the child to feel accepted and successful in their own play, in their own way, deciding how and what to play, with authentic self-generation of play (Chen, Chen, Lin, Huang and Lee, 2019).
Späth and Jongsma (2020) emphasise that becoming autonomous; mastering one's own actions; being free from interference - these can all contribute to a sense of authenticity in autistic individuals.

Autonomy and liberty (continued)
Embracing Authentic Autistic Play
Series
Autonomy is critical, according to Leadbitter, Buckle, Ellis and Dekker (2021), for generating the reality that an individual personally strives for.
This includes the freedom to say 'no' to others.
Physical prompting, overbearing control, communication attempts being ignored and blatant removal of the right to refuse has left many an autistic individual passive, traumatised, and vulnerable to abuse.

Knowing and acting on one's own ideas rather than those of others may seem like an obvious human right, but this is often restricted by those who are skeptical of an individual's capabilities or future outcomes (Späth and Jongsma, 2020). Neurotypical children in education, by and large, are free to go about their business and play in their own way, without repercussions or pathologising, even if that type of play is uncharacteristic of the norm (MacCormack, 2020). Autistic individuals, on the other hand, are subject to assumptions that they have 'widely documented' deficits in play due to difficulties in communication, social interaction and symbolic thinking (Papoudi and Kossyvaki, 2018). Autistic children actually have qualitative and quantitative differences in their play when compared to their neurotypical peers (Kossyvaki and Papoudi, 2016).

However…
This does not mean the child 'cannot be autistic' or 'shouldn't get a diagnosis' because the adults around them cannot see the differences, or the play appears typical.
Every child is different, and there may be a number of reasons that they 'fall through the net' or not be on the grownups' radar.
Most of these reasons have the dominant discourse at the heart of them, and the adults fall into the traps of tropes and myths such as…
This child can't be autistic because I've seen them play imaginatively! This child can't be autistic because they chat to others and join in with activities!
This child can't be autistic because we don't see them misbehave!
Embracing Authentic Autistic Play Series

These types of myths are often heard by parents of autistic children, but the child can still be autistic even if the adults around them don't fully understand their presentation, for example:
A number of authors highlight an enjoyment of imaginary play in autistic children, and autistic adults' accounts give insight to a particular enjoyment of imaginative play based on real-life events as a child, although this preference is as individual as the children themselves are (Pritchard-Rowe et al, 2023).
Autistic children frequently use snippets of speech repeated from tv programmes, movies, online clips and the people around them which can often serve a function that is often unrecognised by language partners other than their parents who are more likely to recognise this as echolalia and can pinpoint the original source of the speech. Parents often identify this speech as stored chunks of language heard by the child and reappropriated to suit the purpose, though sometimes the purpose is simply to be playful (Cohn et al, 2023).
Autistic children can fail, in a sense, at seeming autistic to others, potentially due to coping mechanisms or through support and acceptance of familiar adults, though this can change over time and is often dependent on environmental and social factors (Jellet and Muggleton, 2022).
Yes, they can still be autistic!
Embracing Authentic Autistic Play Series

Module Five:
Authentic Autistic Play Take a little

break!
Embracing Authentic Autistic Play Series

Facilitating authenticity
Autistic play may be described as 'atypical' by some people, and often becomes subject to scrutiny and attempted remediation (Eisele and Howard, 2012).
This is where involved parties may criticise the play or try to re-orientate the individual to 'more appropriate' play behaviours.
Rejecting this approach, according to Eisele and Howard (2012), can lead to an understanding of the true nature of play.
Going beyond this understanding to the level of facilitating authenticity, can include encouragement and support to be themselves.
More specifically:
Acting authentically involves going about one's daily life and engaging with others in accordance with a 'true' or 'core' self.
Bottema-Beutel, Park and Kim, 2017: 98
Perhaps, then, the emphasis in research (and in education) should be on the conditions that facilitate authentically autistic play rather than on comparison between the play of autistic children and their neurotypical peers (Theodorou and Nind, 2010).
Papoudi and Kossyvaki (2018) highlight that normative benchmarks are unlikely to be effective when it comes to autistic play.

Embracing Authentic Autistic Play Series
Many autistic children demonstrate quite sophisticated play, showing imagination, language, and social understanding - just not in the same way as their neurotypical peers (Eisele and Howard, 2012).
In spite of this, the dominant 'deficits' model depicts autistic play as deficient compared to neurotypical peers, is often cited as a key impairment, and
the recurrent evidence of difficulties in the development of play skills has led to this 'deficit' being added as a defining feature of the condition.
Eisele and Howard, 2012: 139
Models of defining autism
According to Kapp (2020?), there are alternative models of viewing autism and autistic autistic activities, such as thee neurodiversity model.
The neurodiversity model, unlike the deficits model, "sees autistic individuals as possessing a complex combination of strengths and challenges" (p503).
The scrutiny of autistic play and its attempted reorientation should be outright rejected, instead supporting and understanding its true nature should be the default (Eisele and Howard, 2012).

Defining autistic play
Embracing Authentic Autistic Play Series
Because of the dominant discourse, play has come to be known as a core characteristic in defining autism, with the so-called difficulties, delays and deficits in play being viewed as far removed from the norms of other children's play (O'Keefe and McNally, 2020).
O'Keefe and McNally(2020) suggest that the play experiences of autistic children are simply differences across all aspects of play.
However, how much they differ in each area can and will vary, reflecting the heterogeneity of autism.
Adaptations should be allowed, and an understanding of play through the lens of

individual needs, preferences, and presentations is vital.

Autistic play ought to be embraced by everyone working with or caring for the children.
It is not a disordered version of normal and there is no need for it to be trained out of them or reorientated in any way (Mitchell and Laschewicz, 2018; Conn and Drew, 2015).

Strategies for success
If conditions such as environment, freedom of expression, acceptance, and so on, are conducive then autistic individuals have the opportunity to break even with their peers, or potentially surpass them in a number of ways (Milton and Bracher, 2013).
On the other hand, dismissing autistic features as peculiar or wrong fails to recognise these features as vital strategies for success.
It is crucial to support experiences that are "compatible with their dispositions, without being forced to mimic non-autistic behaviours" which could be potentially damaging (Milton and Bracher, 2013: 64).
Thus, it follows that play should be allowed to be enjoyed with authenticity, being true to themselves, and that which interests them, not what others expect of them. After all, according to Claparède:
the function of play is to allow the child to express [themself] to display [their] personality, to pursue momentarily the line of [their] greatest interest in cases where [they] cannot do so through serious activities.
in Piaget, 1962: 158-159
Embracing Authentic Autistic Play Series

Do these things really work?
Play frameworks and programmes of intervention that do not take this into account, even when they aim to be fun and toys are used, are little more than adult-led comprehension activities (Gerber, 2017).
Autistic adults, when consulted, often raise concerns over the lack of autonomy in play.
They also warn against using an autistic child's 'special interest' (a subject or object dear to their heart) to cajole certain behaviours out of them that are deemed more favourable (Gibson, Pritchard and De Lamos, 2021).
The purported goals for these interventions are often defended as efforts to increase independence and avoid limiting educational and social opportunities (Leaf, Courtemanche, Taubman, McEachin, Sheldon and Sherman, 2012) but it appears that the opposite may be true.
Leaf et al (3023) actually acknowledge that the manipulation of play interests and behaviours in interventions may not reflect the child's true play preferences, despite behavioural psychologists' and therapists' standpoints that they have 'fixed' the problem.
Embracing Authentic Autistic Play Series

Preferred play
Doody and Mertz (2013) suggest that levels of independence and autonomy can actually increase by being able to participate authentically in true preferred play.
Identifying and embracing the genuine play preferences of autistic children can have wide-ranging implications with potentially far more positive outcomes.

Autistic children may be so used to being manipulated (or 'reinforced') by the adults around them that they simply did as they thought others expected (Lead et al, 2012).
Potentially, "a history of reinforcement for imitation and direction following… was a factor in behaviour change" instead of actually fixing any perceived problems with their behaviour (p482).
Children are manipulated in such a way that they have no option but to behave a certain way, thus reducing their freedom of thought and choice.
In order to direct a child towards the adults' preferred activity, they would manipulate a 'choice' from the child through their own actions:
While participant played with [baseline] toy, the experimenter did not provide any social interaction or verbal communication, did not play with the toy, and did not make eye contact with the participant. If the participant attempted to interact with the experimenter, minimal attention or responding was provided."
Leaf et al, 2012: 276
Embracing Authentic Autistic Play Series

(In)Authentic play
'Successful' behavioural modification and 'rehabilitation' programmes often depend on the identification of preferred stimuli such as toys and activities (Verschuur, Didden, Van der Meer…and Lancioni, 2011).
Preference assessments, however, may fail to identify authentic preferences (Leaf et al, 2012).
Therefore evidence for behavioural approaches lack evidence of understanding of authentic autistic play in any meaningful way.
Furthermore, 'preferences' gleaned from the grown-ups may not match the preferences of the autistic child, which may be likely to change over time, unbeknownst to anyone other than the child themself (Verschuur et al, 2011).
Embracing Authentic Autistic Play Series
Programmes designed to make use of the child's play preferences to reinforce and manipulate desired behaviours fail to be play-based at all, and cease to be play in its true sense:
Play is a chance for children… to develop themselves in accordance with their own ideals of what they should be.
Henricks, 2008: 164
Interrupting or removing the interests and activities that autistic children enjoy can lead to undesirable outcomes that adults pathologise such as meltdowns (Mottron, 2017).
This creates a contrived self-fulfilling prophecy - deficits in play seemingly being evidenced by the resultant outbursts of negative behaviour.

Natural autistic play
Creating barriers to playing in ways that autistic children find joy and satisfaction has ongoing implications, such as"contributing to the construction of negative identities and marginalised roles, and to the stress of 'acting normal'" (Conn, 2015: 1203).
Research on the natural ways that autistic children play, particularly in relation to how they play at school, as opposed to clinical environments, is limited (Holmes and Willoughby, 2005).
Their world may be less social more individual, with play reproducing their sensory

and perceptual experiences, exploring and enjoying how things interact, look, feel, smell, taste, sound and move, including the environment, objects, toys and also play partners (Conn, 2015).
According to Conn and Drew (2017), autistic play, as described in narratives by autistic individuals, might often centre around:
orderly play using objects and words
construction play
physical play
straightforward turn-taking with another (that is preferably clear and predictable) visual, sensory, and perceptual play
one-partner control play, and
play with reduced verbal participation.

A uniquely autistic play culture
Embracing Authentic Autistic Play
Series
The dominant discourses that play down the value of the unique interests and experiences, and the individuality with which autistic people engage, essentially devalue the person in the process (Conn and Drew, 2017).
This can lead to children reluctant to share their passions and special interests for fear of being rejected or perceived as being socially unacceptable (Mitchell and Lashewicz, 2018).
If the grown-ups make attempts to mould or correct play preferences, they are simply reinforcing this fear, thus eradicating the fun and enjoyment of play.
Mitchell and Lashewicz (2018) invite them instead to re0evaluate what they themselves define as fun or functional, resisting societal norms and embracing the child's 'quirky' play
The consistencies across the narratives of from autistic biographers suggest at the very least a shared phenomenon of perception and sense-making, if not a uniquely autistic play culture (Conn, 2015).
It may be that autistic play can be affectionately described as 'quirky' by family and friends, and some autistic adults lean in to 'quirky' to describe their play. The description should also reinforce that the differences in play can reaffirm individualisation and personal dignity, and support the construction of autistic identities (Mitchell and Lashewicz, 2018).
Autistic biographers, according to Conn and Drew (2017), note that these qualitative differences in play, with their preferred play and special interests being unapologetically quirky, are indicative of a potential autistic play culture.

From now on in our everyday practice, we should find opportunities to embrace the just-thisness, appreciate the quirks, and enact radical acceptance of truly authentic
autistic
play.
Final thought…
Elise Guthrie Stirling
Embracing Authentic Autistic Play Series

Module Five:
Authentic Autistic Play

Learning Outcomes
Continue to critically examine the dominant discourse around play and autism.
Consider the role of autonomy and liberty in playing authentically within their own preferred play.
Explore the possibility of a uniquely autistic play culture with qualitatively different play from their peers.
In module five we were learning to:
Further identify presumptions around autistic play and how these may impact a child's wellbeing.
Recognise how much autonomy and liberty in play may be given to other children compared to autistic children and the potential effect of this.
Think about maximising authentic play in your context, that accounts for not only individual preferences but perhaps a wider autistic play culture.
By the end of module five you should now be able to:
Embracing Authentic Autistic Play Series

Use these 5 critical questions to shape your

reflections. Pause the screen and ask yourself:
What are you learning?
How are you doing?
How do you know?
How can you improve?
Where do you go for
help?

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